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December 1986

# Outlook '87 Charts

63rd Annual Agricultural  
Outlook Conference

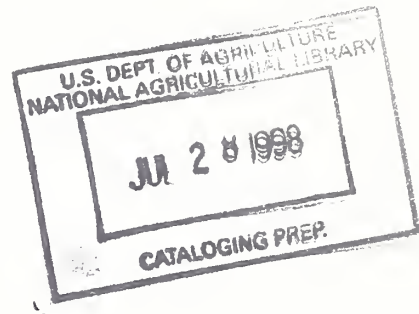
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# Outlook '87 Charts

63rd Annual Agricultural  
Outlook Conference

December 1986



# Outlook '87 Charts

Presented at the 63rd Annual Agricultural  
Outlook Conference, December 2 - 4, 1986  
U.S. Department of Agriculture, Washington, D.C.

The black and white reproducible charts and tables in this publication were originally presented as color slides before the Outlook Conference. This publication does not include all visuals used at the Conference, because not all speakers used slides or provided material for this compilation.



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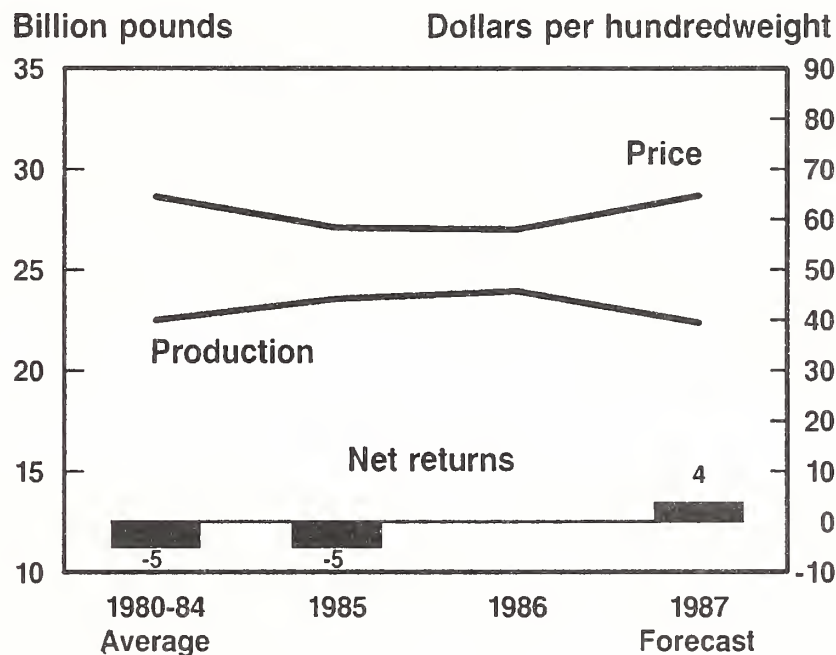


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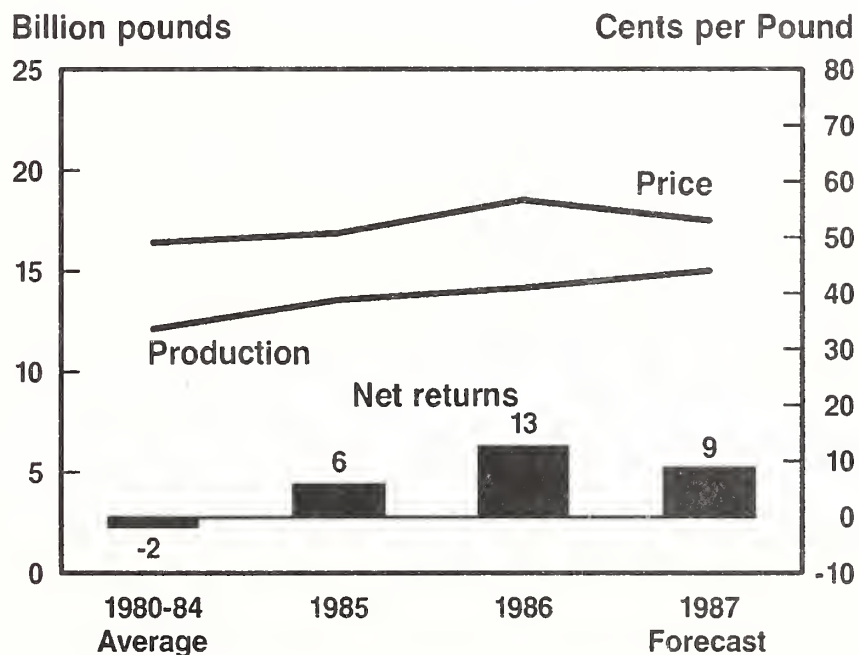
A copy of the Conference proceedings is available for \$15 through the World Agricultural Outlook Board, Room 5143 - South Building, USDA, Washington, D.C. 20250.



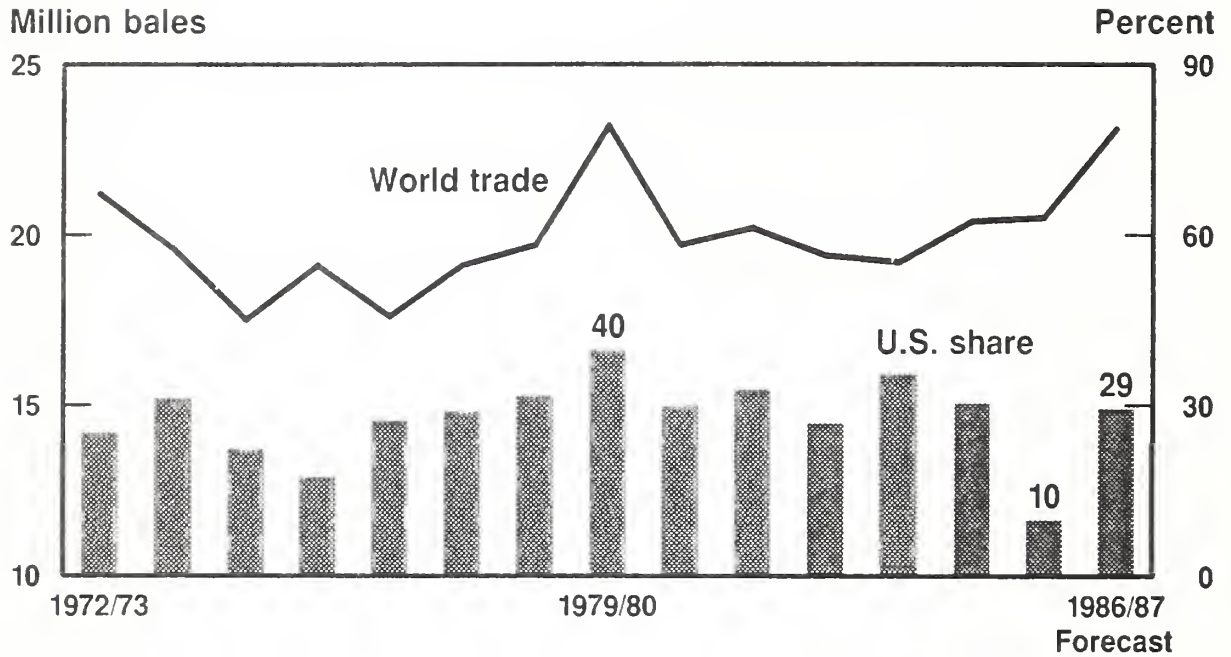
## Beef Production, Price and Net Returns



## Broiler Production, Price and Net Returns

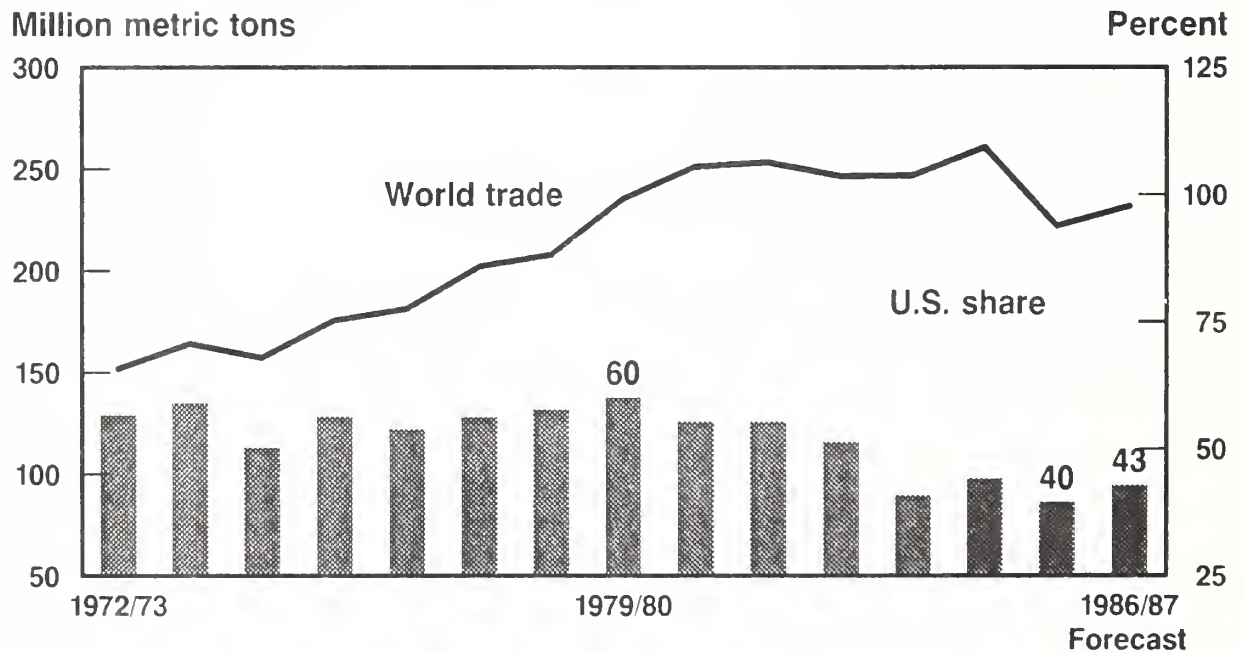


# World Cotton Trade



# World Crop Trade

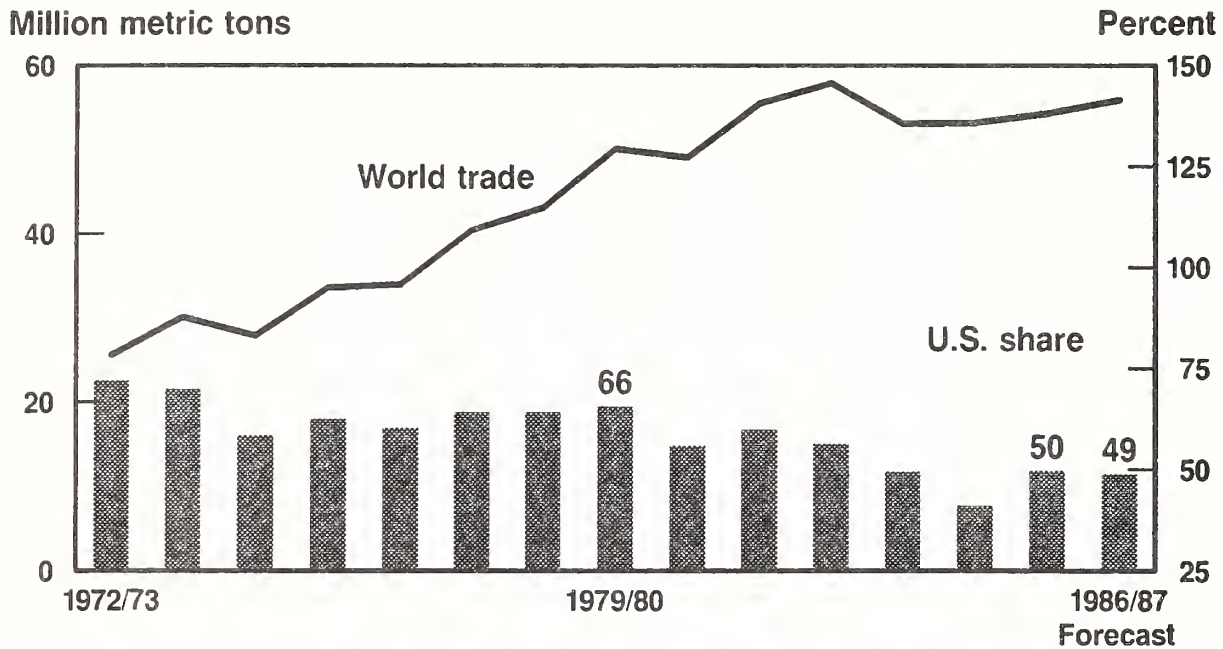
Wheat, Coarse Grains and Soybeans



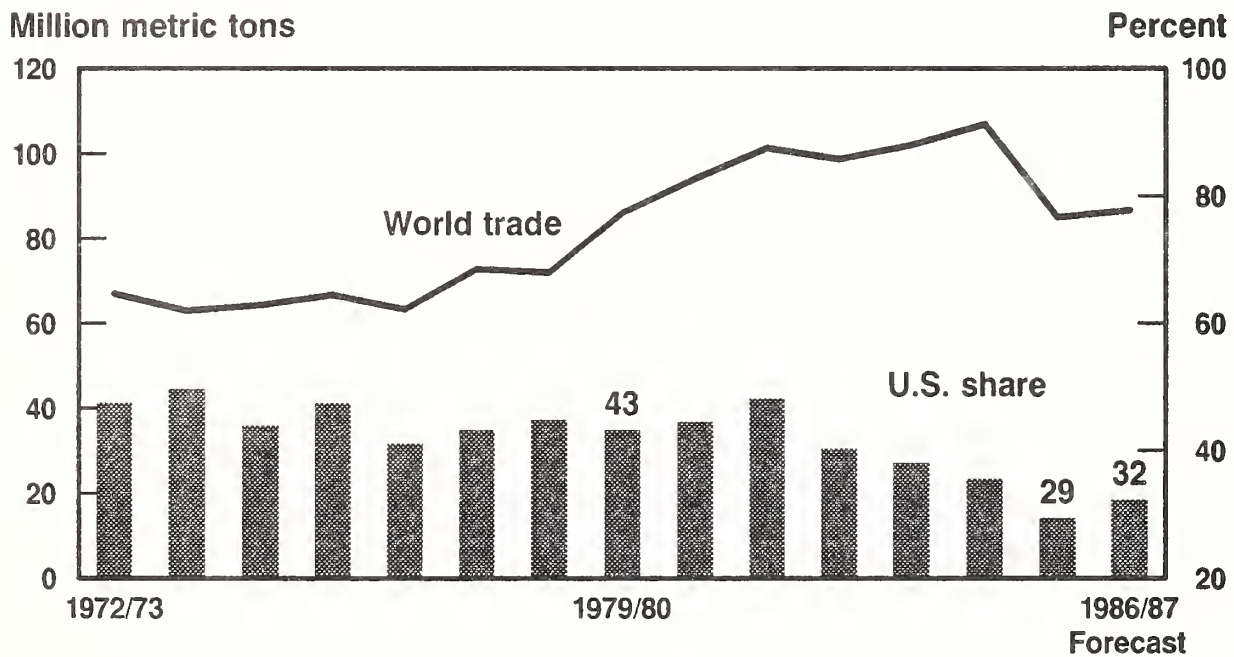


# World Soybean Trade

Soybeans Plus Soybean Equivalent of Meal

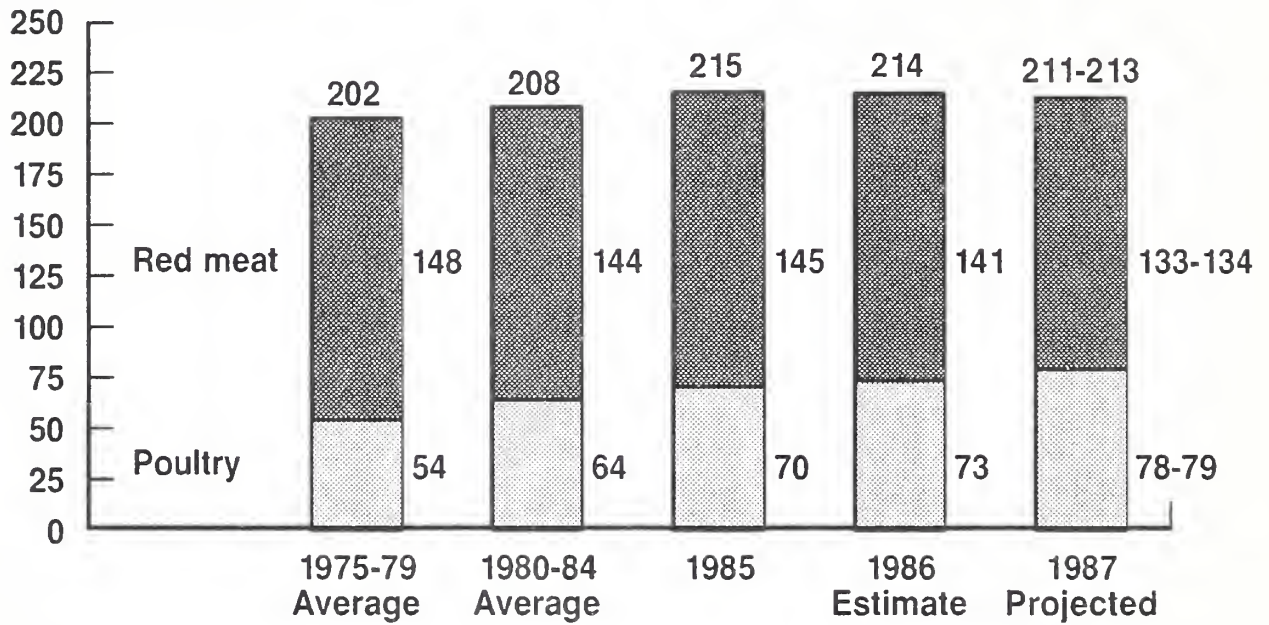


# World Wheat Trade



# U.S. Per Capita Meat Consumption

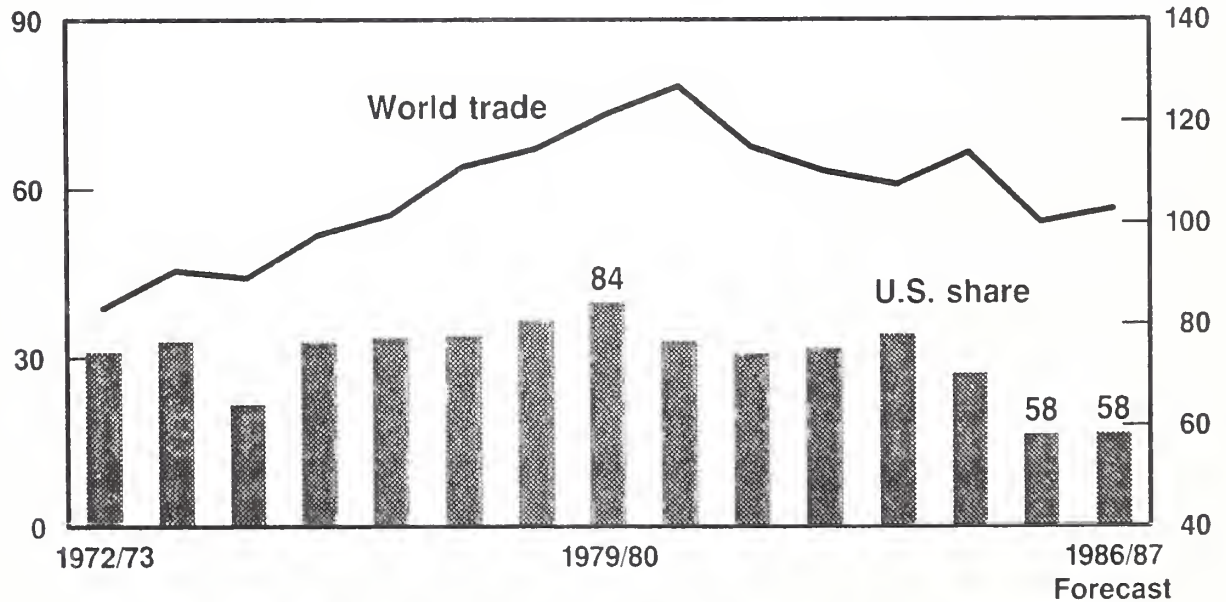
Pounds per capita



# World Corn Trade

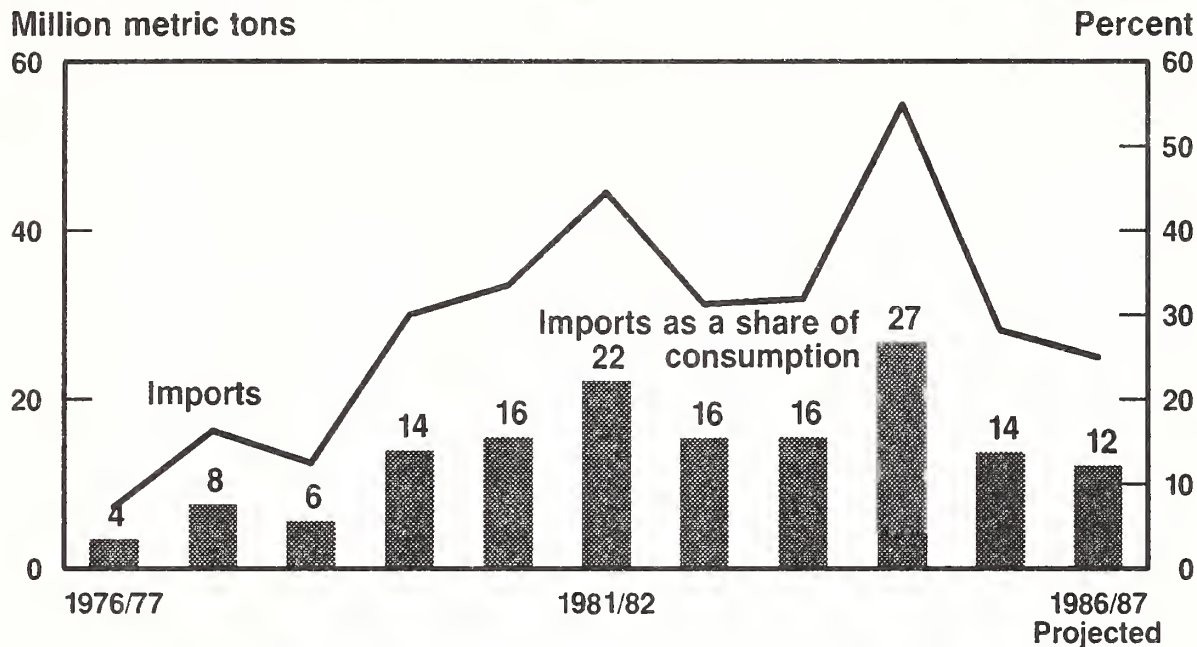
Million metric tons

Percent

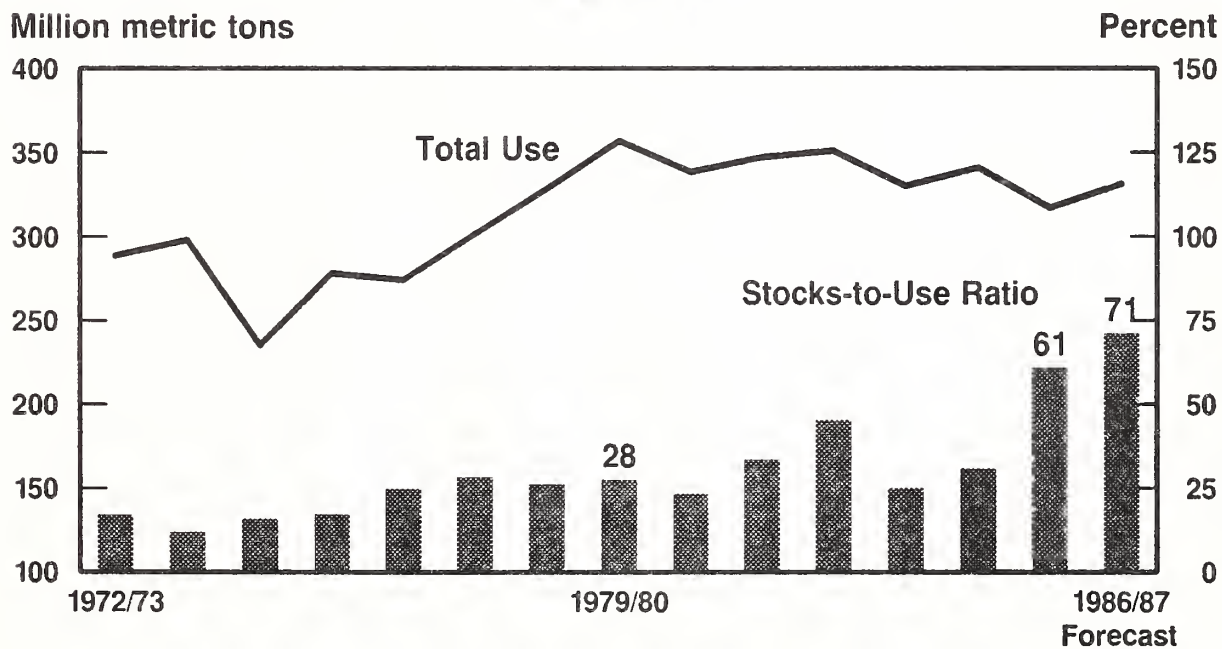




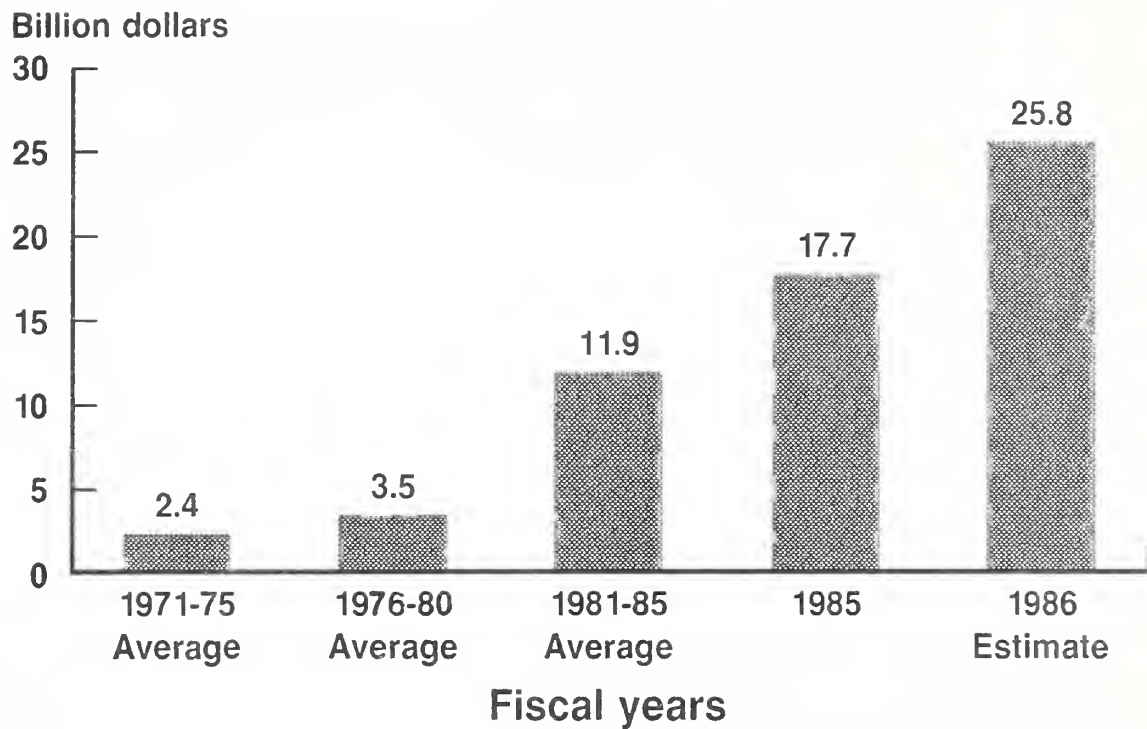
# Soviet Wheat and Feed Grain Imports and Imports As Share of Domestic Consumption



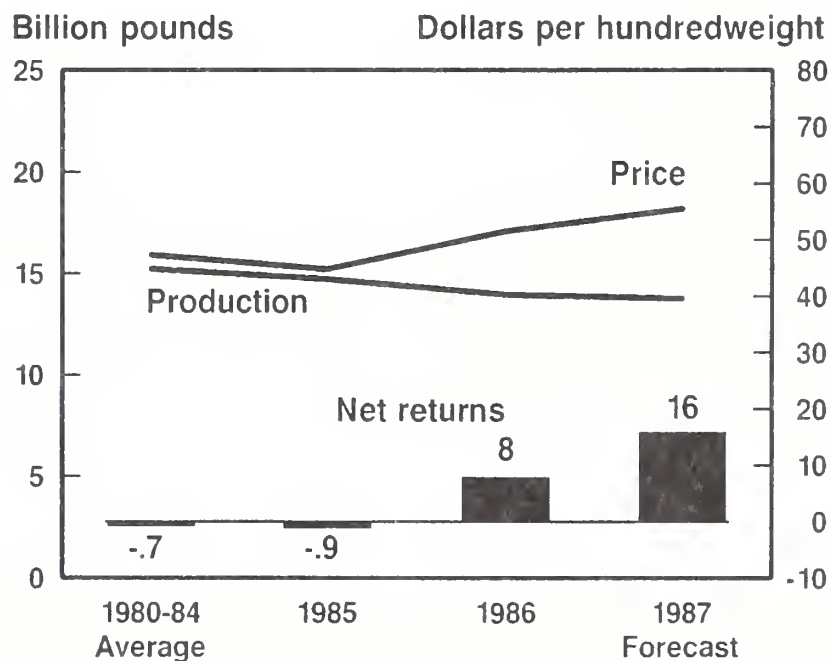
# Total U.S. Crop Use and Stocks-To-Use Ratio



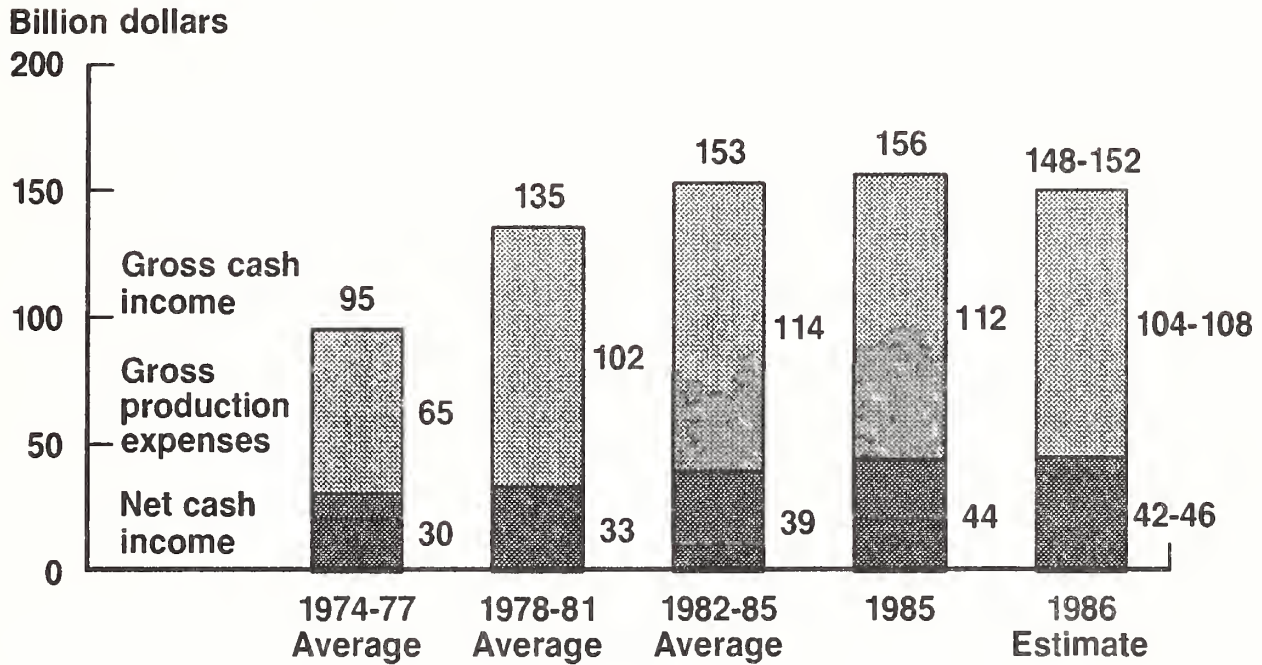
# Net Outlays for U.S. Farm Programs



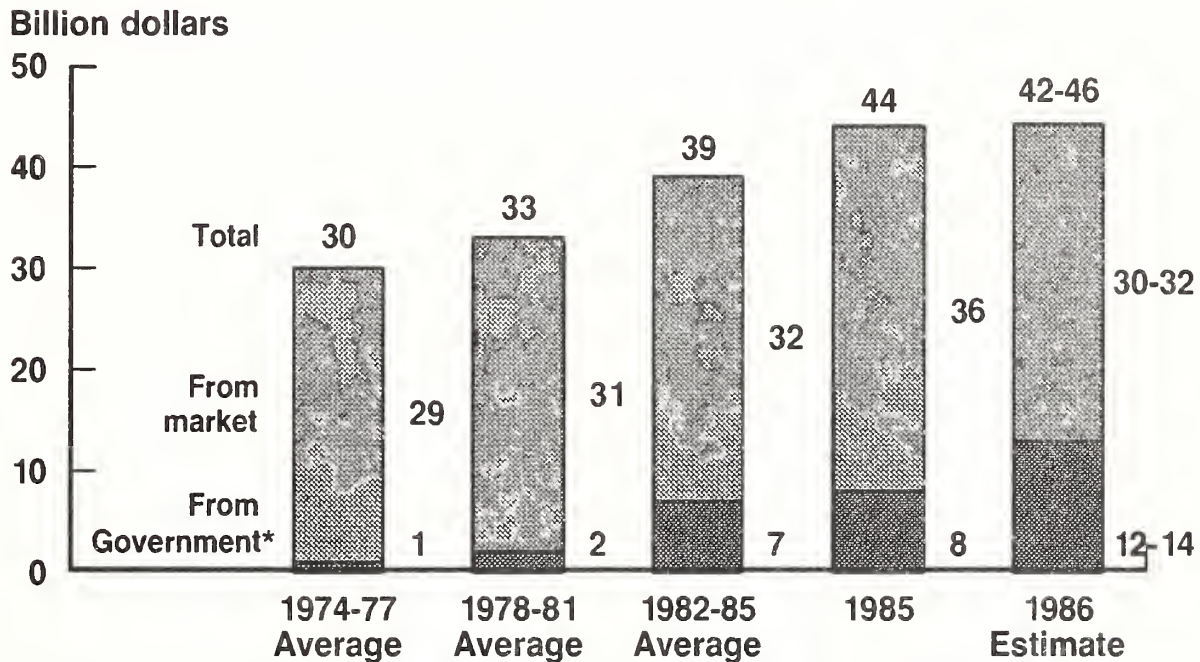
# Pork Production, Price and Net Returns



# Gross and Net Cash Farm Income

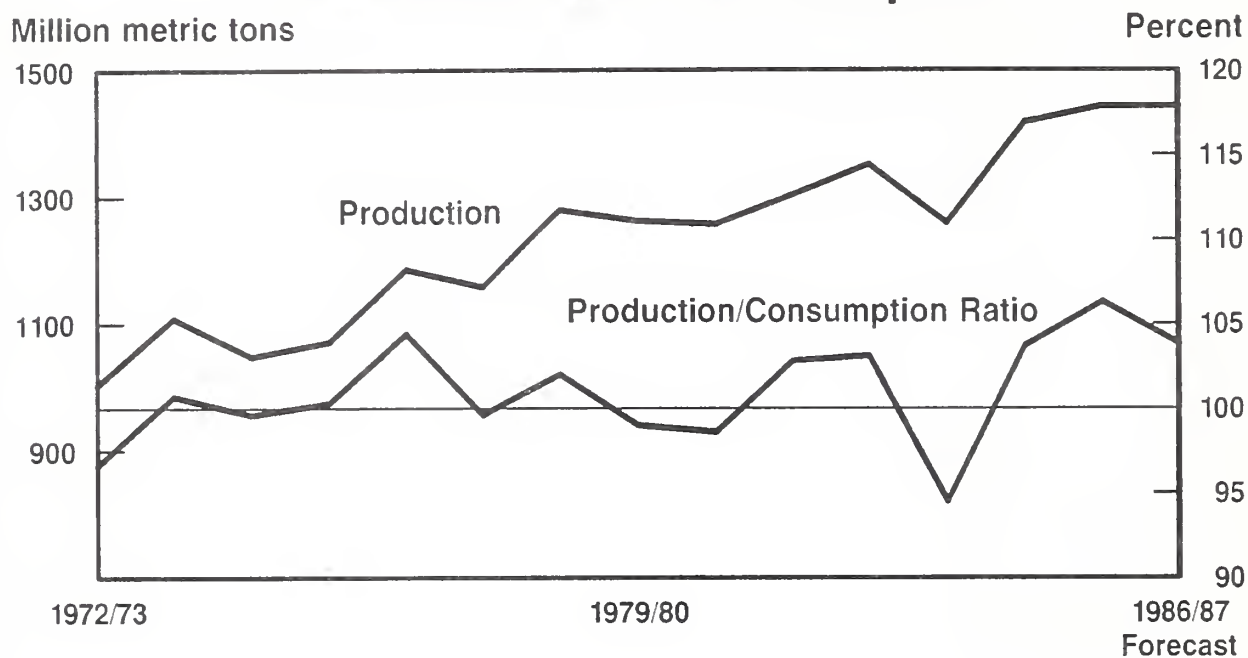


## Net Cash Farm Income

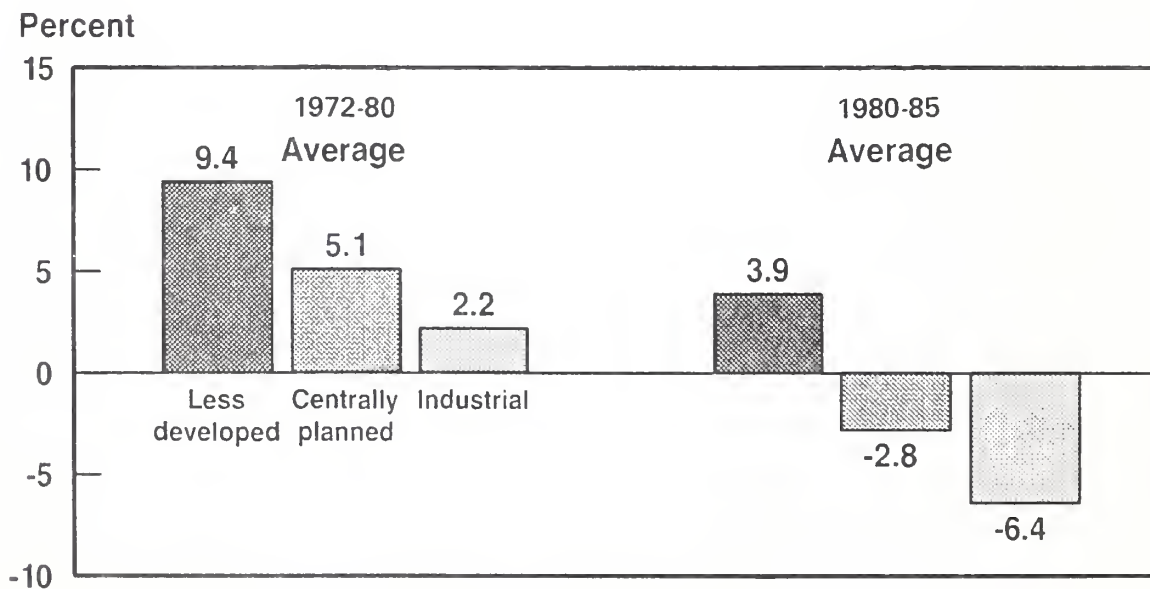


\*Direct government payments only.

# Global Crop Production and Ratio of Production to Consumption

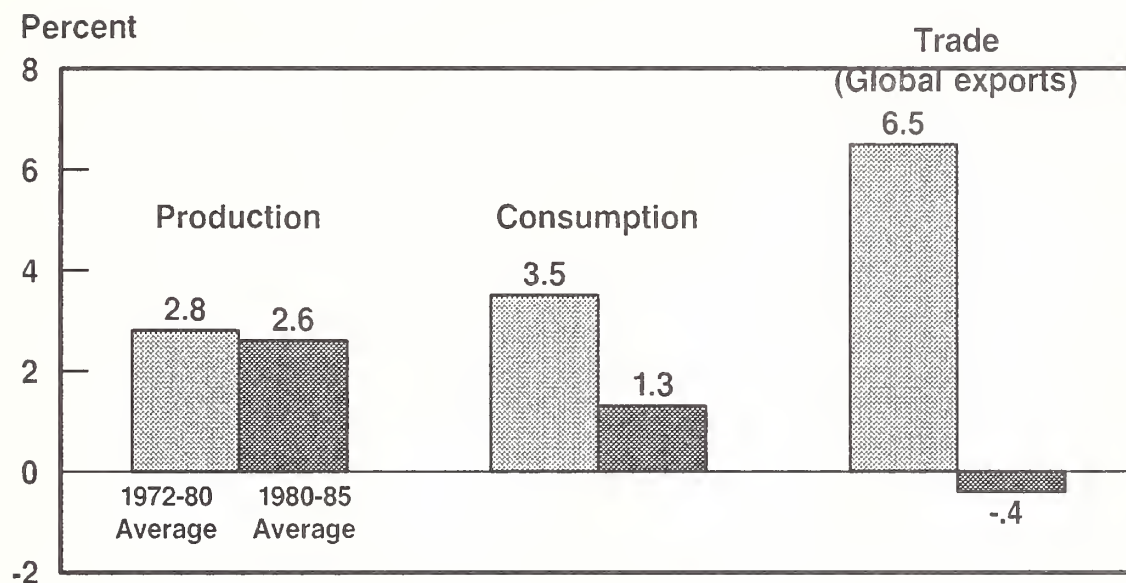


## Grain Import Growth Abroad Wheat and Feed Grains

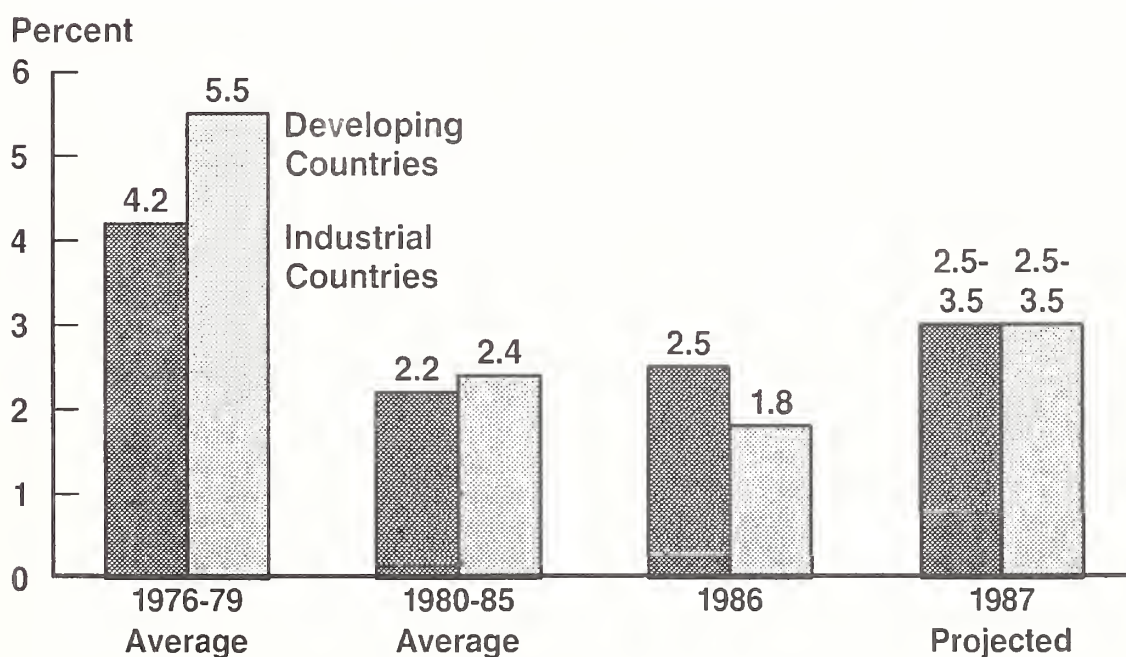




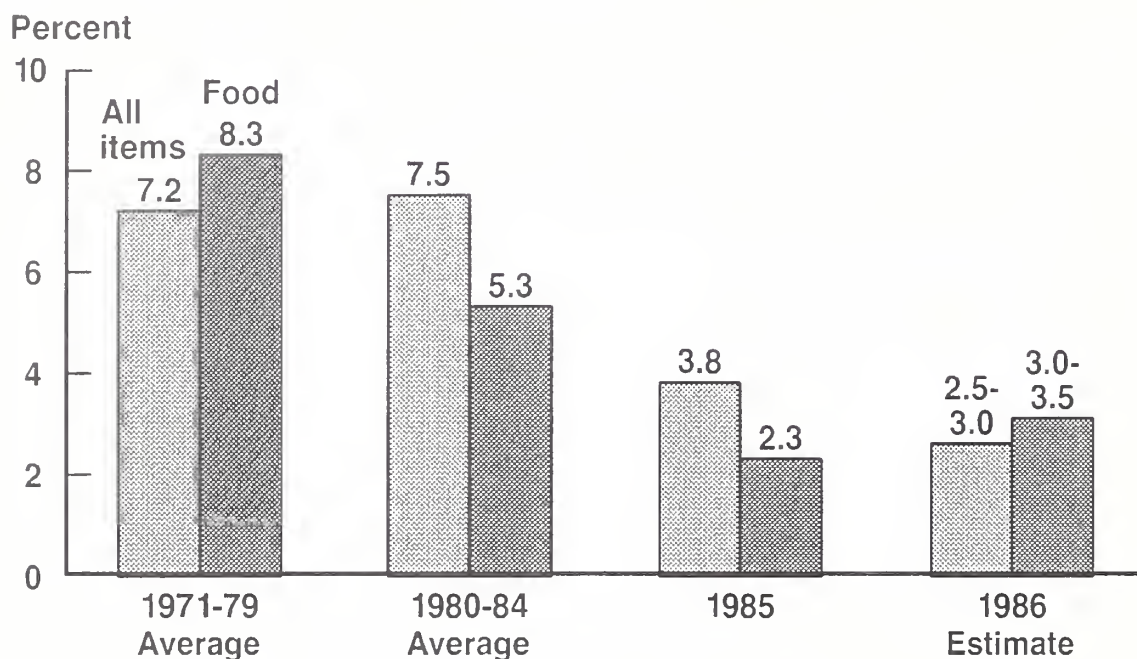
# Crop Production and Demand Growth Abroad



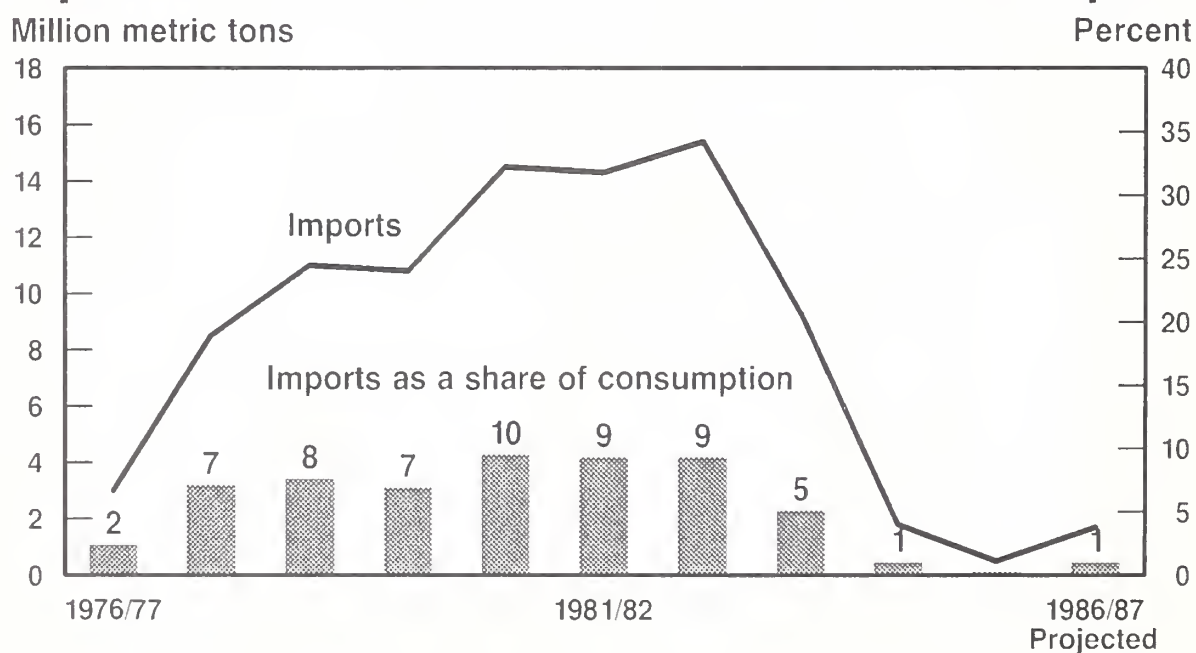
# Economic Growth Rates Abroad



# Changes in Consumer Price Indexes



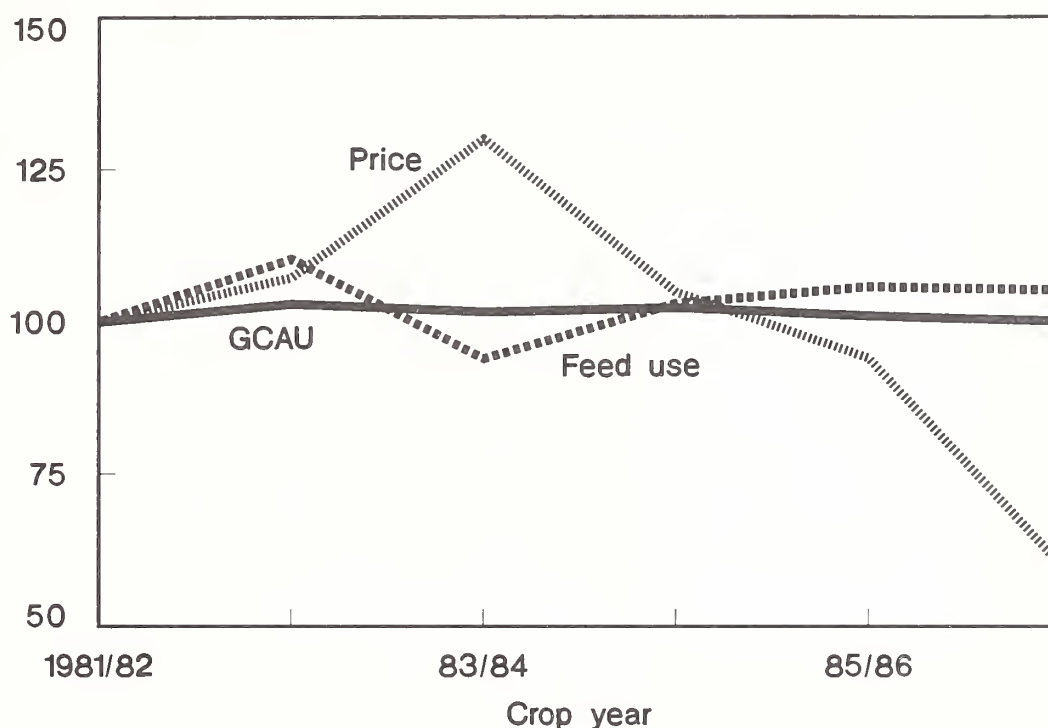
# Chinese Wheat and Feed Grain Imports and Imports As Share of Domestic Consumption





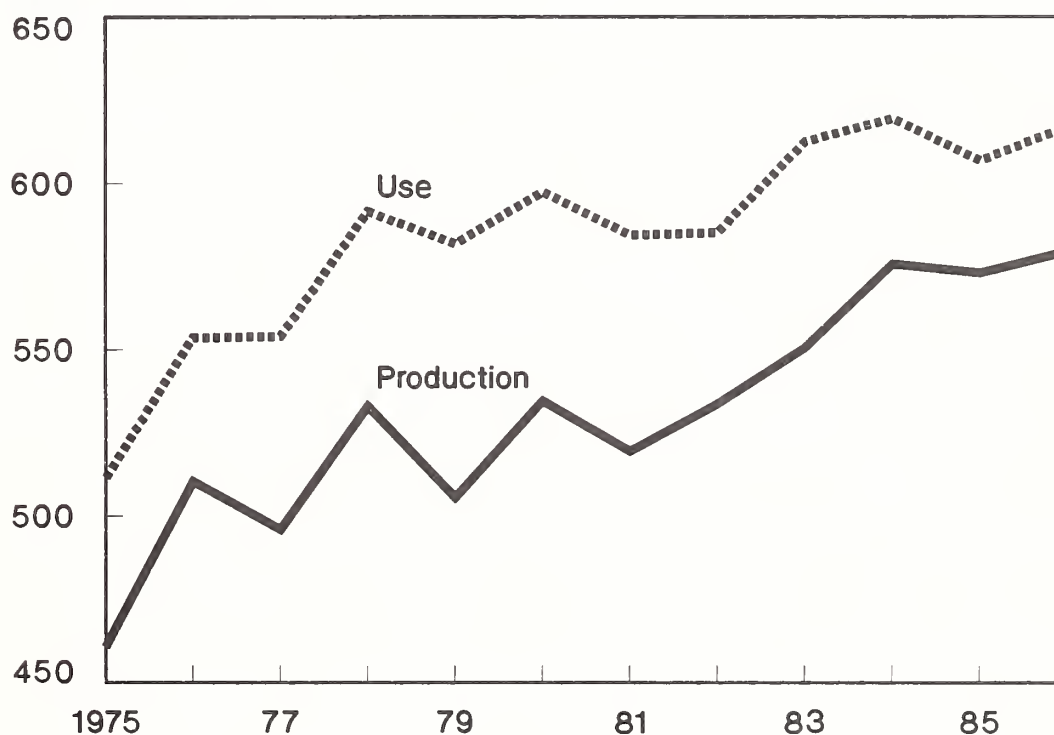
## Animal Units, Feed Use, and Prices

% of 1981/82



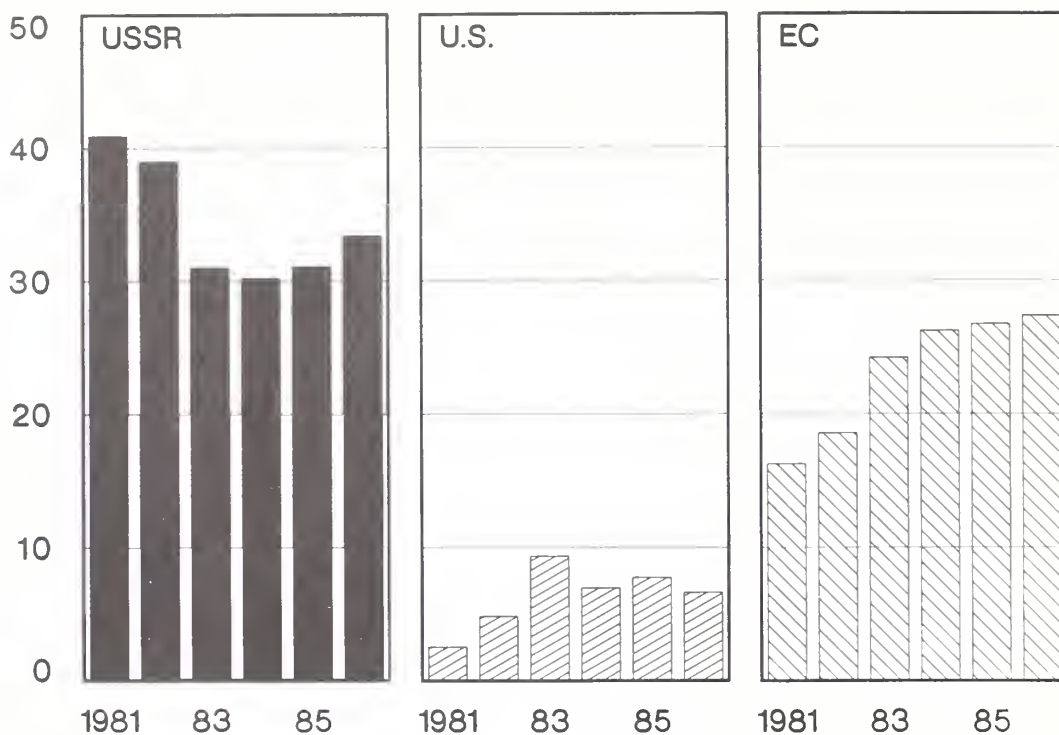
## Foreign Coarse Grain Production and Use

Million metric tons



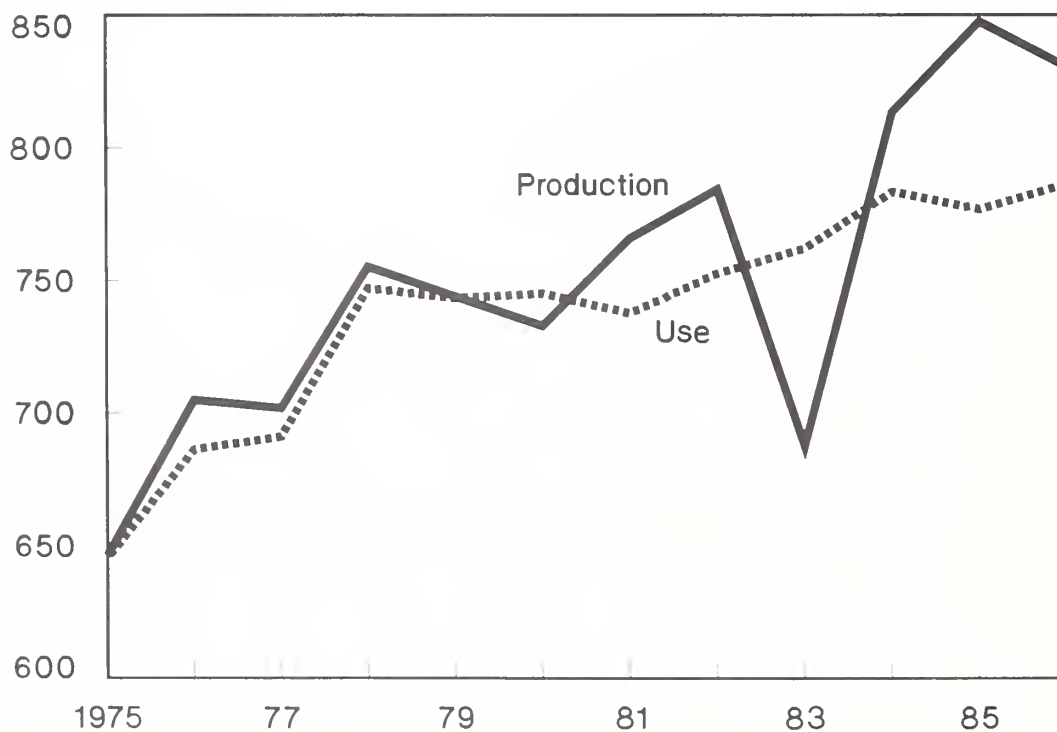
## Wheat's Share of Total Grains Fed

Percent



## World Coarse Grain Production and Use

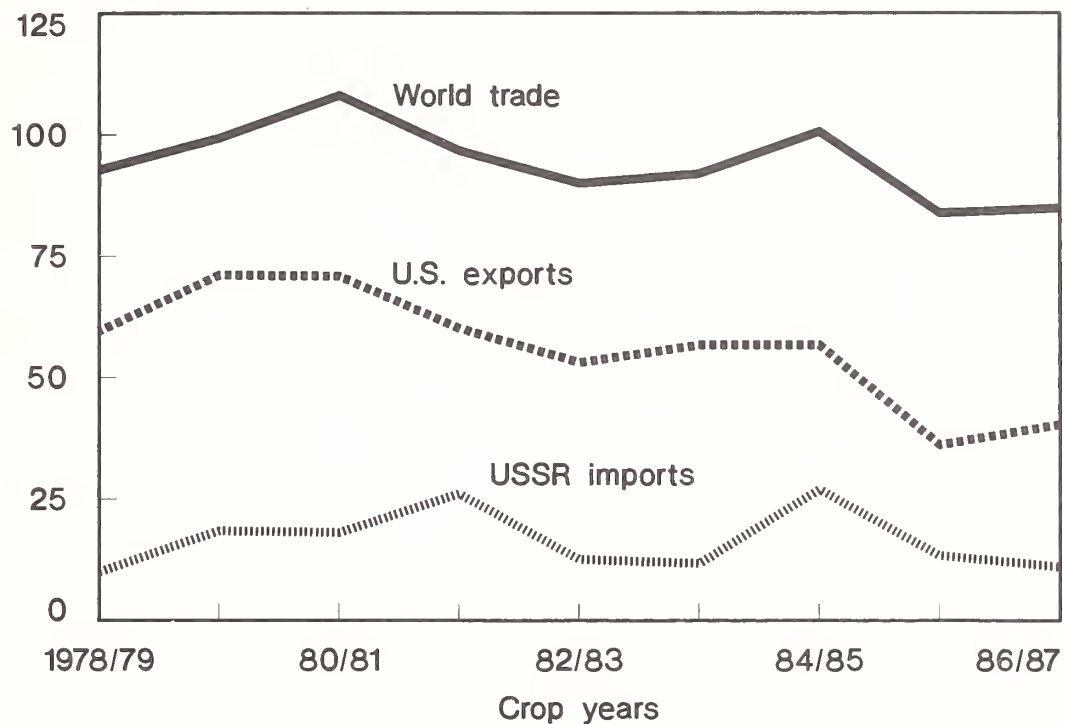
Million metric tons





# World Coarse Grain Trade

Million metric tons



## World Coarse Grain Trade

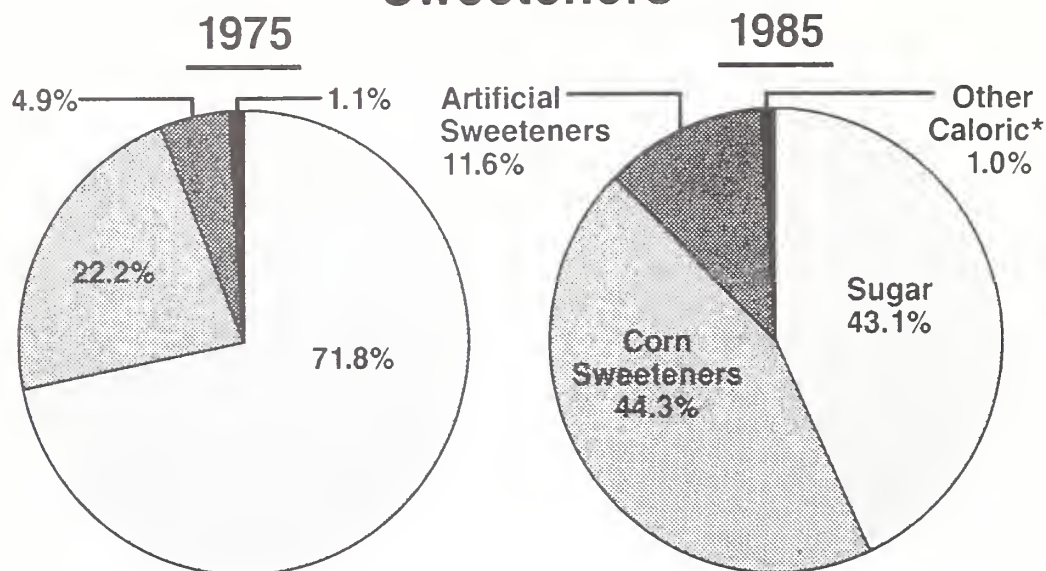
	1985/86	1986/87	Change
Million metric tons			
<b>Exports</b>			
U.S.	36.4	40.4	4.0
Argentina	9.7	9.9	0.2
West Europe	10.2	7.3	-2.9
China	6.8	6.0	-0.8
Australia	5.1	3.8	-1.3
Canada	5.8	6.5	0.7
East Europe	2.4	3.7	1.3
Others	7.4	7.2	-0.2
<b>Total</b>	<b>83.8</b>	<b>84.8</b>	<b>1.0</b>
<b>Imports</b>			
Japan	21.5	22.1	0.6
USSR	13.0	12.0	-1.0
West Europe	6.3	6.1	-0.2
Eastern Europe	5.9	4.7	-1.2
Others	37.1	39.9	2.8
<b>Total</b>	<b>83.8</b>	<b>84.8</b>	<b>1.0</b>

1986/87 forecast.

October/September years.



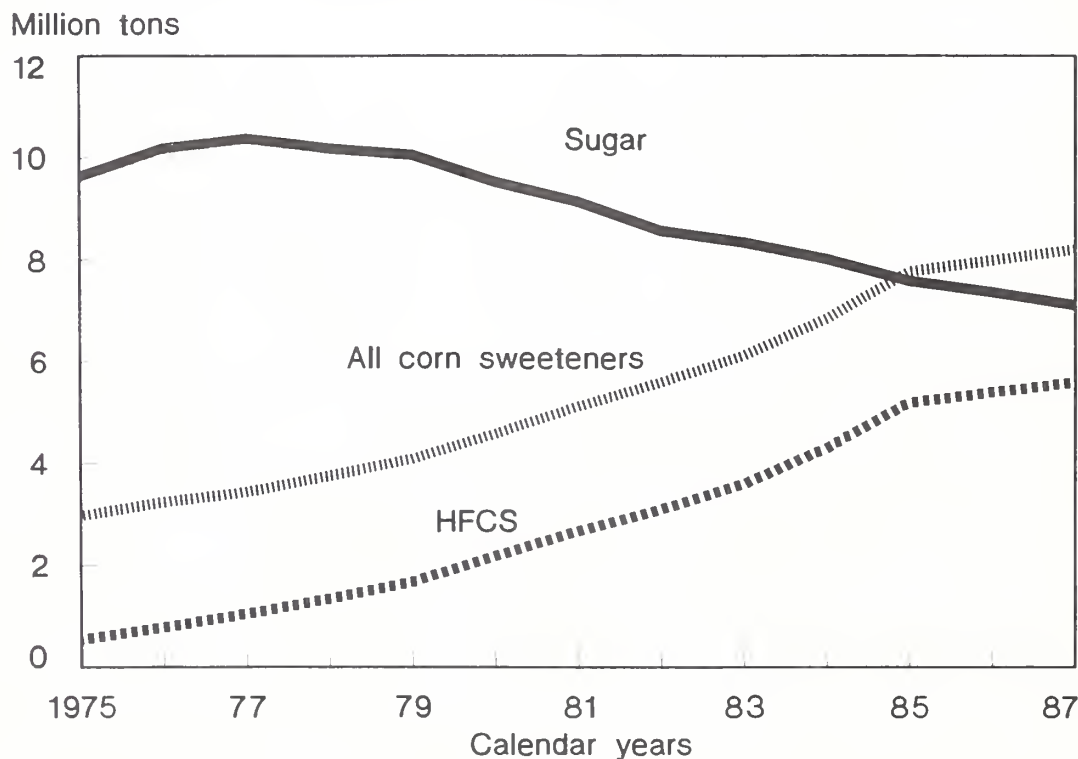
## U.S. Per Capita Consumption of Sweeteners



\*Honey and edible syrups.

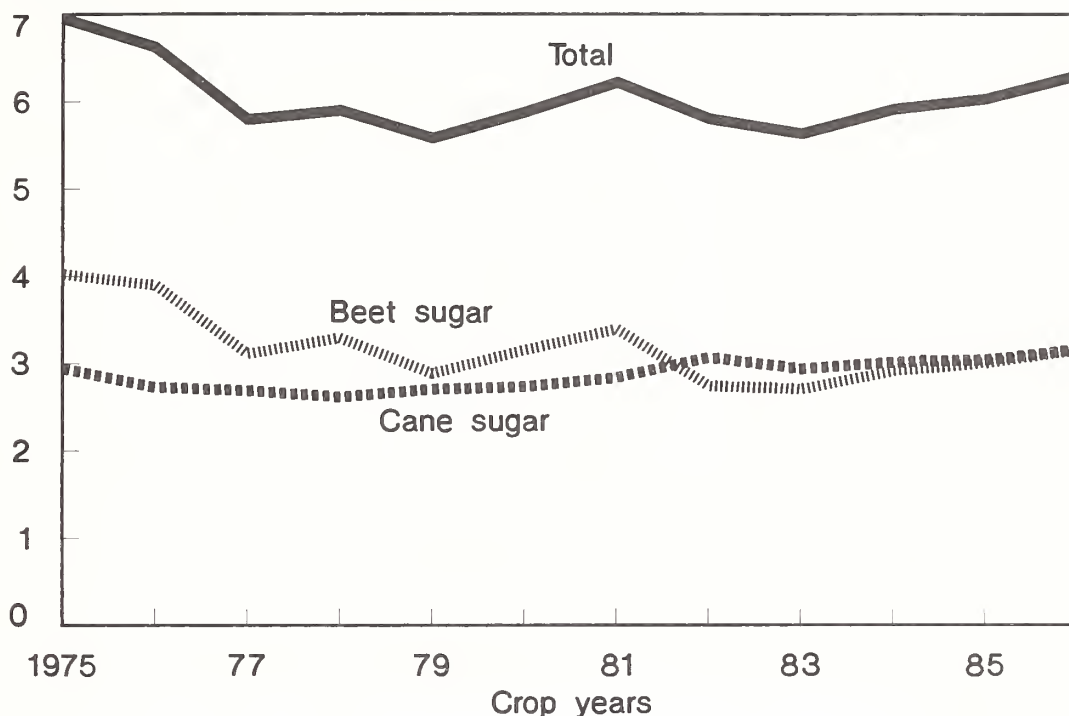


## U.S. Sugar and Corn Sweetener Deliveries



## U.S. Sugar Production: Beet, Cane, and Total

Million tons



## Estimated Quantity of Sugar in Selected Food Imports

	1981	1985
	1,000 tons	
Sweetened chocolate	7.8	27.5
Sweetened cocoa and confectionery coatings	0.6	4.4
Candy and confectionery	32.0	77.3
Pastries, cakes, and puddings	13.2	32.0
Edible preparations, including gelatine	10.5	41.0
Miscellaneous foods	<u>11.9</u>	<u>28.7</u>
Total	76.0	211.0

## **U.S. Average Retail Price for Sugar**

<b>Fiscal year</b>	<b>Cents a pound</b>
1981	45.3
1982	33.7
1983	35.8
1984	36.4
1985	35.7
1986	35.4

## **Returns to Management and Risk**

	<b>1984 crop</b>	<b>1985 crop</b>
	<b>Dollars an acre</b>	
Barley	-30	-44
Corn	-21	-22
Cotton	-39	-39
Soybeans	-12	-7
Sugarbeets	105	100
Sugarcane	-101	-79
Wheat	-20	-29

## Sugar and Corn Sweetener Deliveries

	Peak year	1975	1980	1985	1987
		Million tons			
Sugar	10.4 (1977)	9.6	9.5	7.6	7.1
HFCS	5.6 (1987)	0.5	2.2	5.2	5.6
All corn sweeteners	8.2 (1987)	3.0	4.6	7.8	8.2

## U.S. Cane Sugar Refining Capacity

	1981	1986
Refining capacity in million tons/year, raw value	7.1	5.6
Number of refineries	20	14

## **U.S. Imports of Raw Sugar**

<b>Fiscal year</b>	<b>1,000 tons, raw value</b>
1980	4,717
1981	4,881
1982	3,523
1983	2,981
1984	3,030
1985	2,223
1986	1,850

Note: Sugar quota started May 1982.

## **U.S. Prices for Raw Sugar (New York)**

<b>Fiscal year</b>	<b>High</b>	<b>Low</b>	<b>Average</b>	<b>MSP</b>
1982	22.45 (Aug.)	15.66 (Oct.)	18.84	19.88
1983	22.59 (May)	20.44 (Oct.)	21.76	20.78
1984	22.06 (May)	21.47 (Dec.)	21.84	21.17
1985	21.56 (Oct.)	19.51 (Sept.)	20.89	21.57
1986	21.01 (Feb.)	18.68 (Oct.)	20.38	21.50

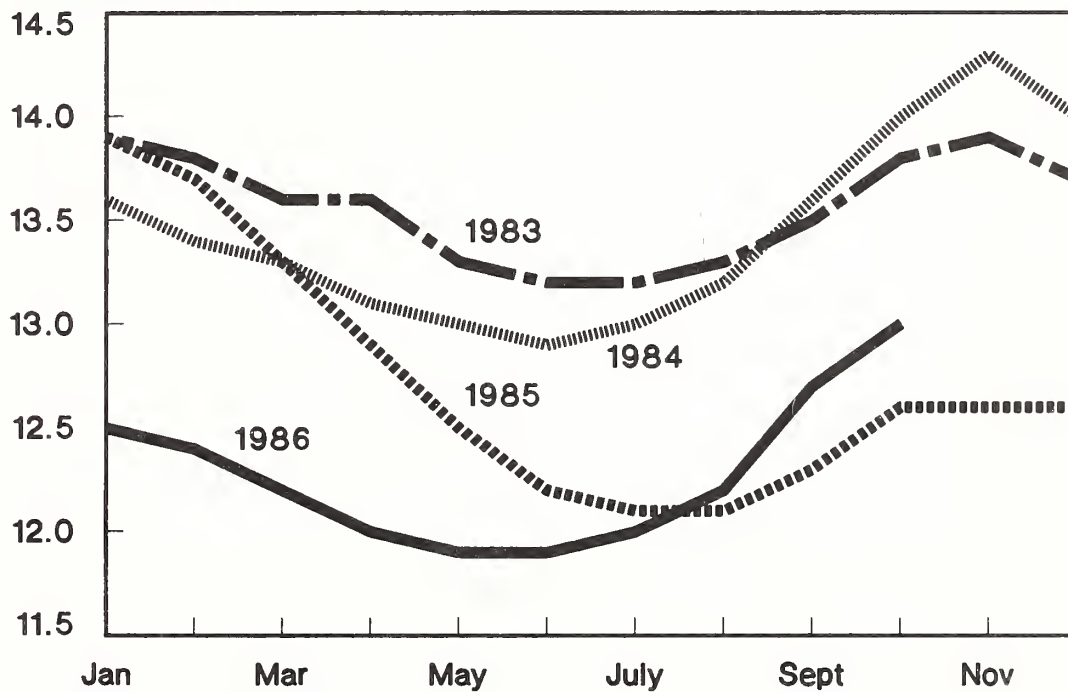
## U.S. Sugar Production

	1975-81 average	1982-85 average
1,000 tons, raw value		
Beet sugar	3,390	2,834
Cane sugar	2,745	3,008



## All-Milk Price

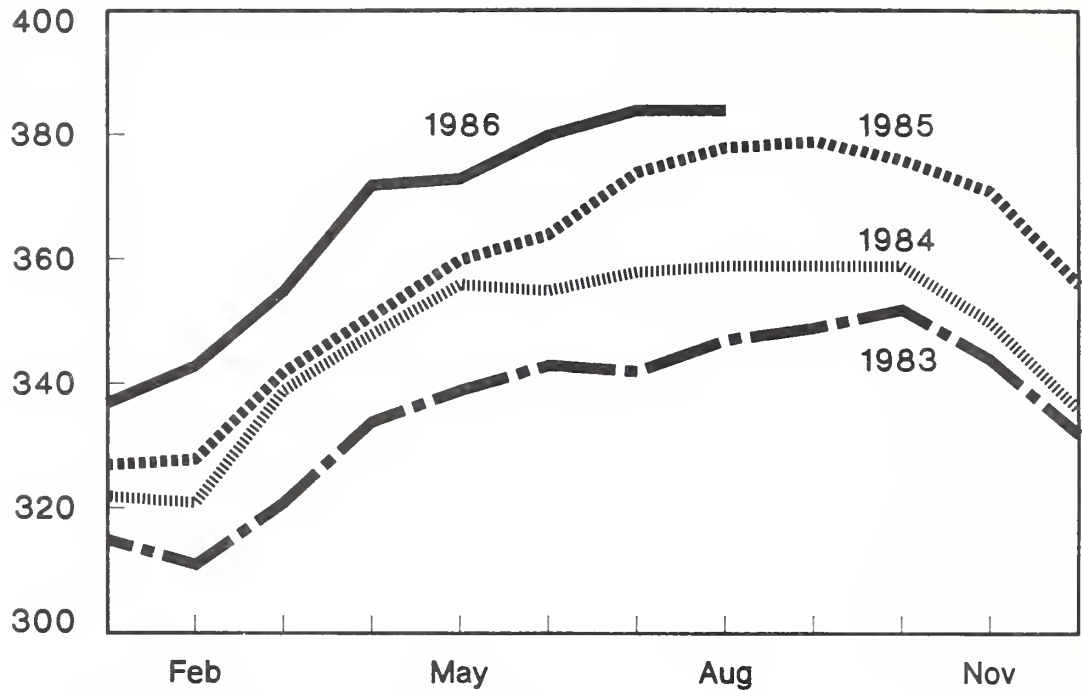
Dollars per cwt



Delivered to plants and dealers.

## Commercial Use of All Dairy Products\*

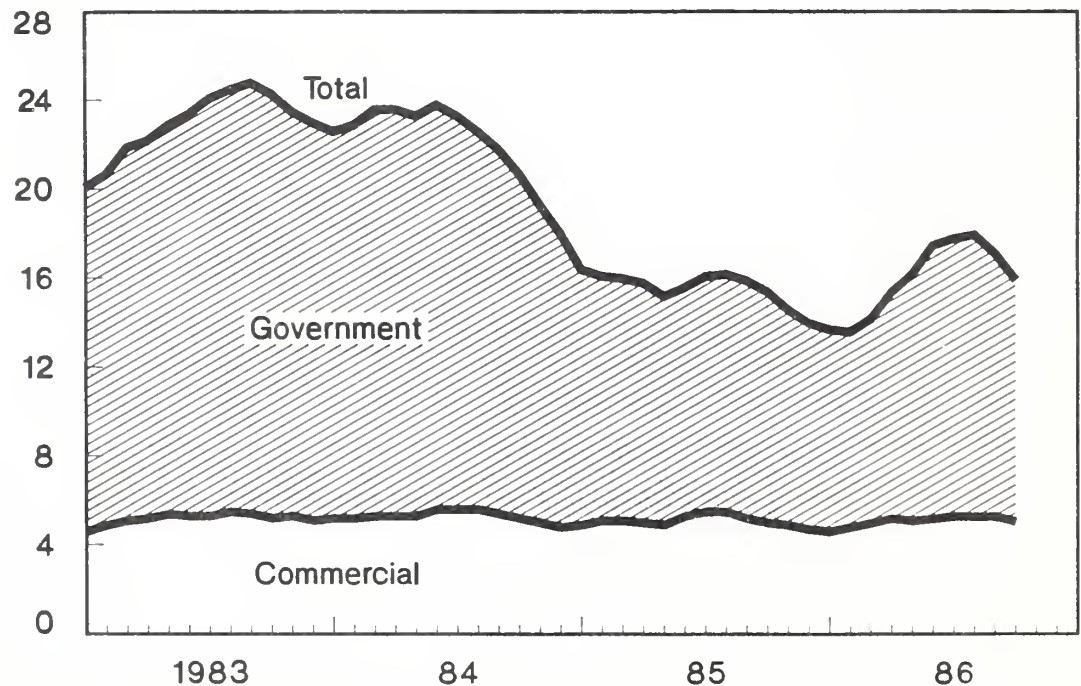
Million pounds per day



\* Milkfat basis. Three-month moving average, centered

## Dairy Product Stocks\*

Billion pounds

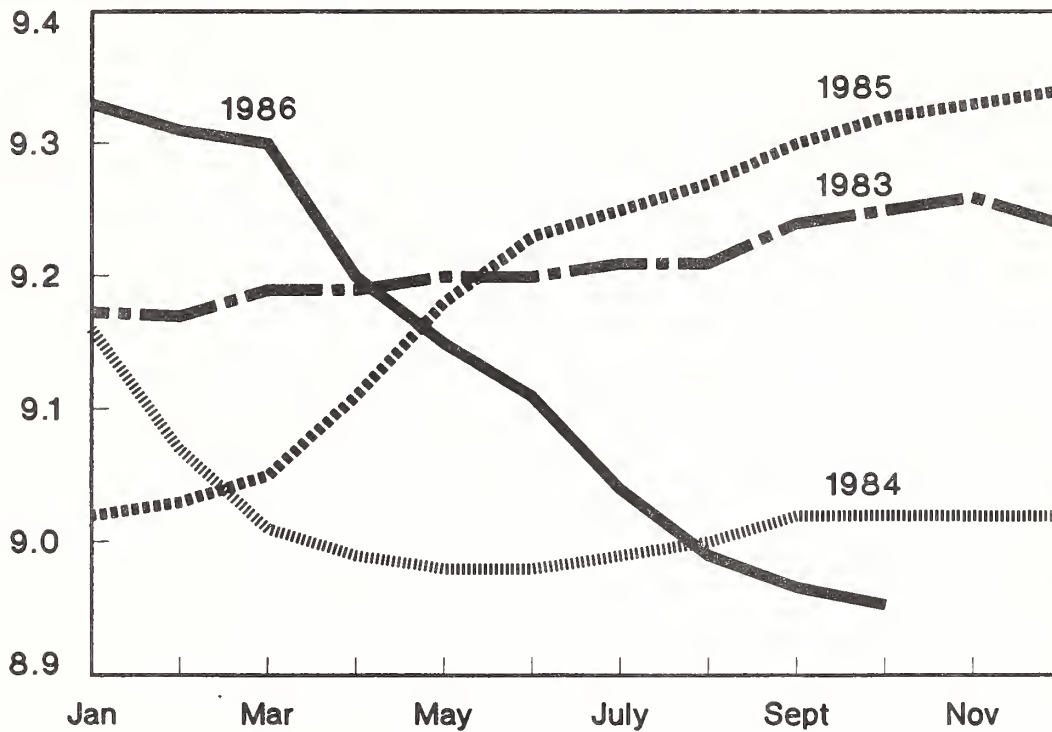


\* First of month, milkfat basis.



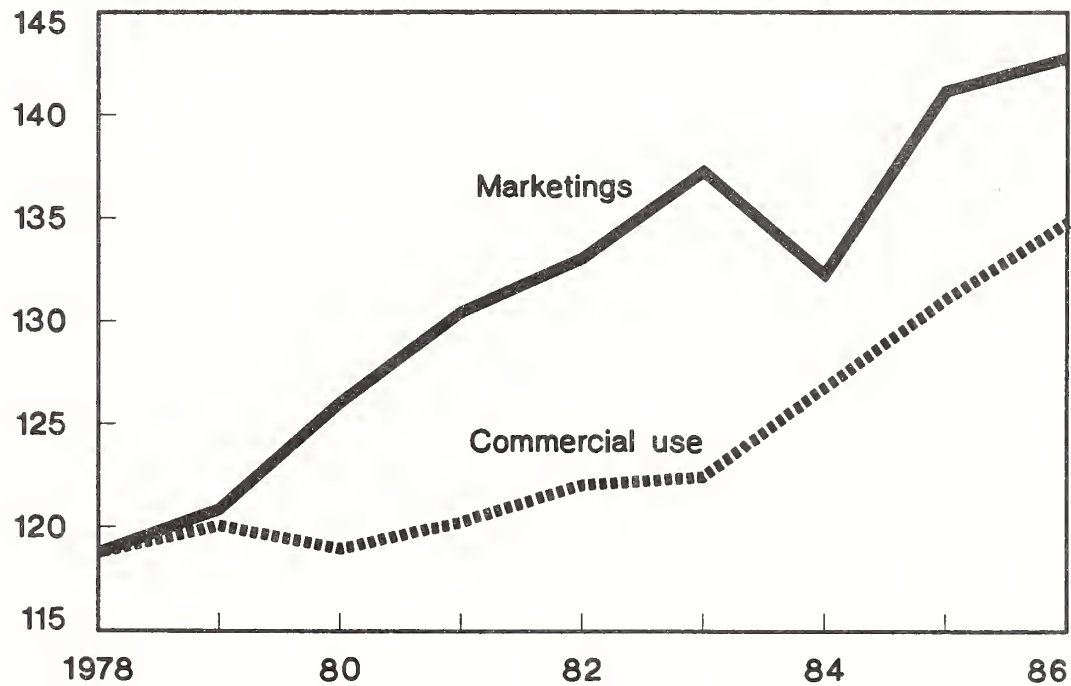
## Milk Cows on Farms, 21 States

Million head



## Milk Marketings and Commercial Use

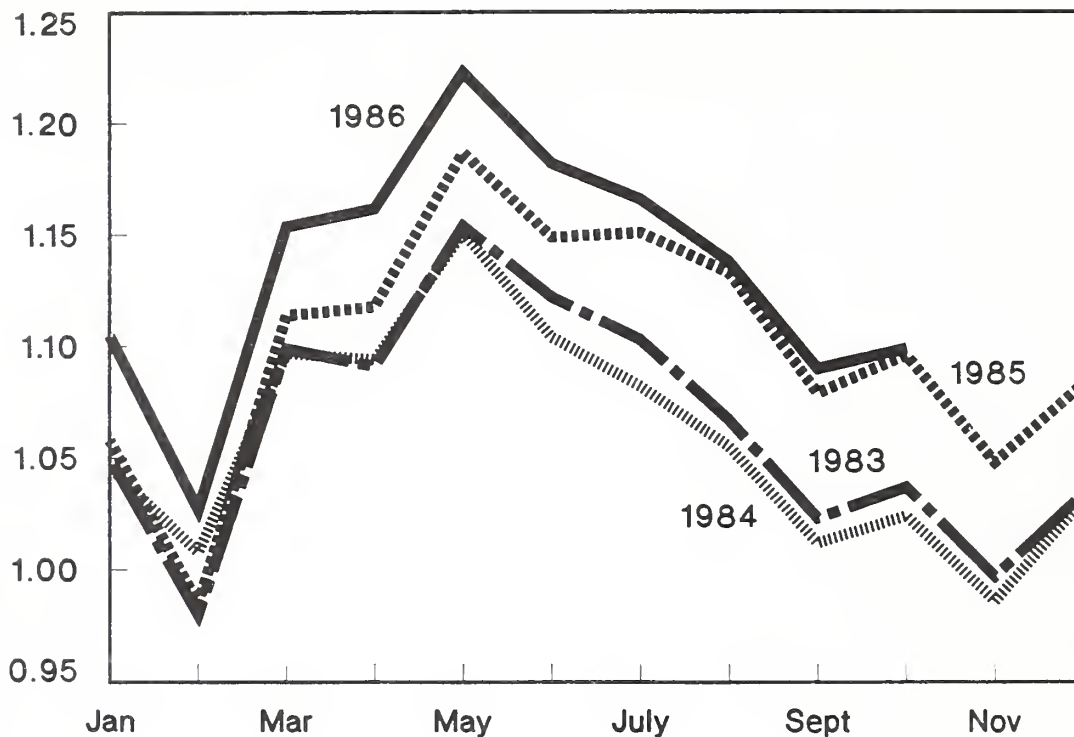
Billion pounds



1986 estimated.

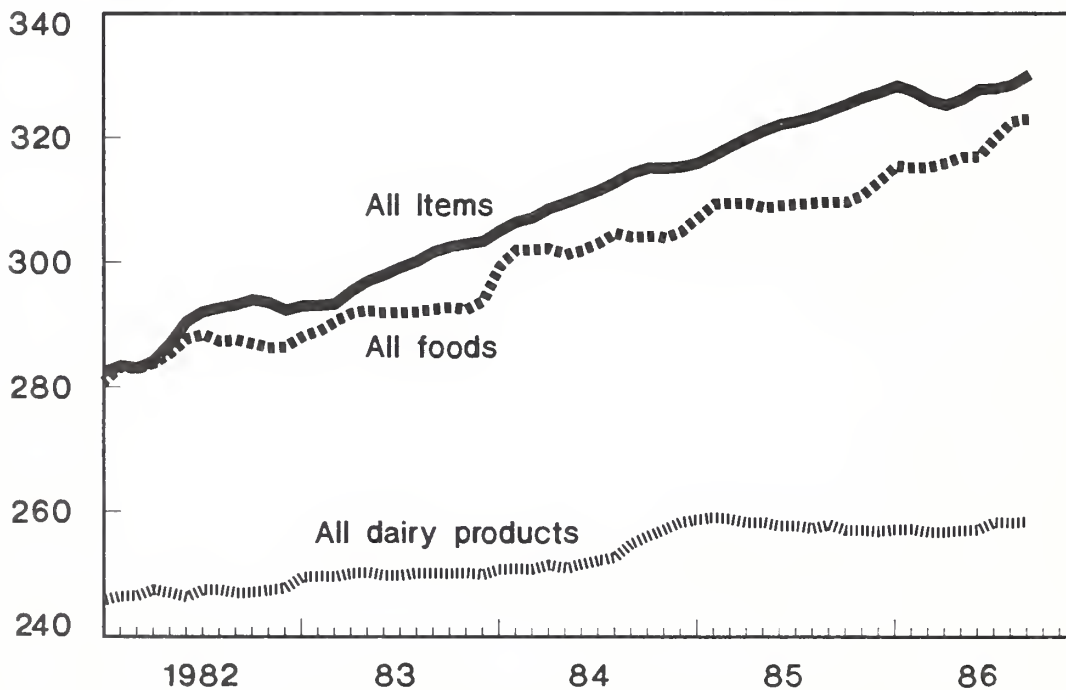
## Milk Production per Cow, 21 States

Thousand pounds



## Retail Price Indexes

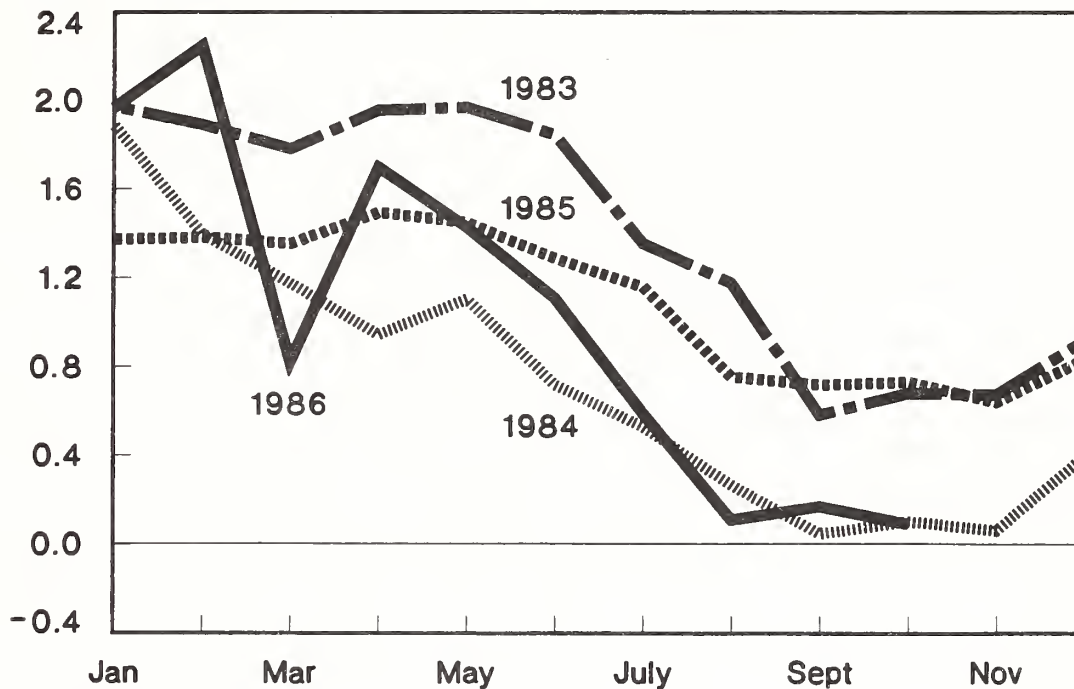
% of 1967



Consumer price index for all urban.

## USDA Dairy Product Purchases\*

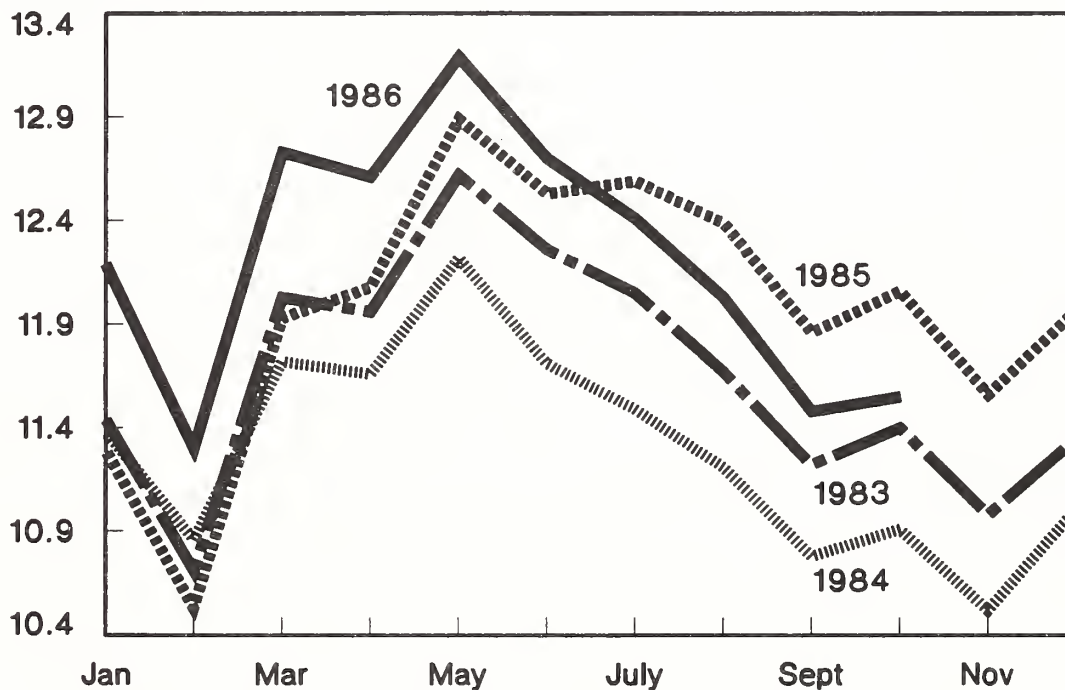
Billion pounds



\* Net removals, milkfat basis.

## U.S. Milk Production\*

Billion pounds

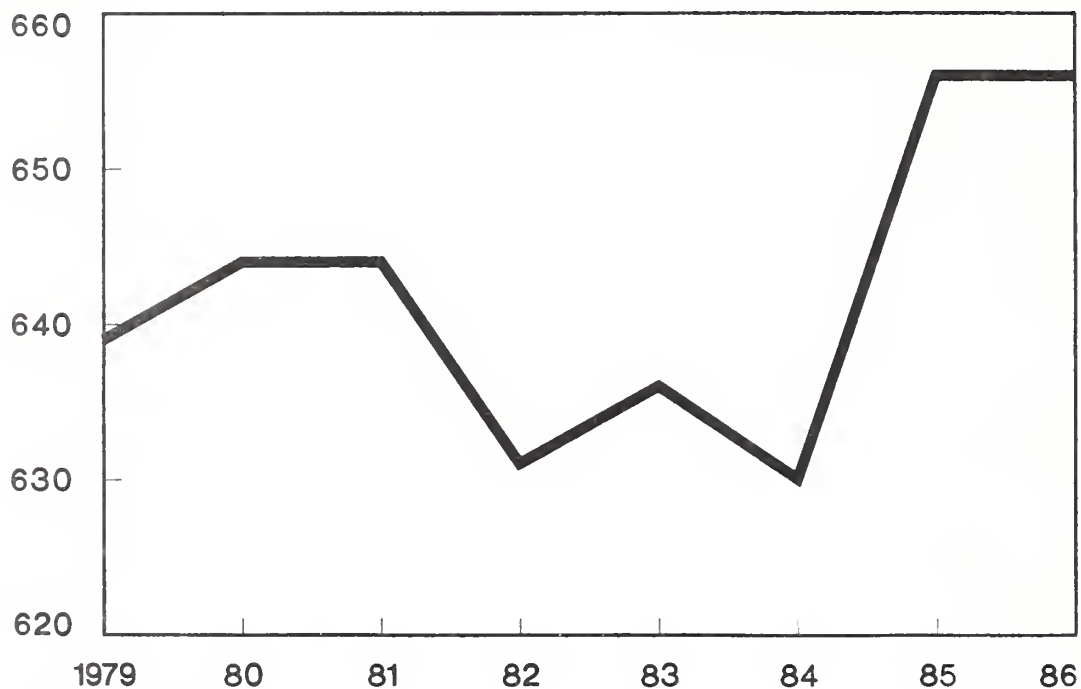


\* Estimated from data for 21 States beginning April 1986.



## Average Dressed Weight of Cattle

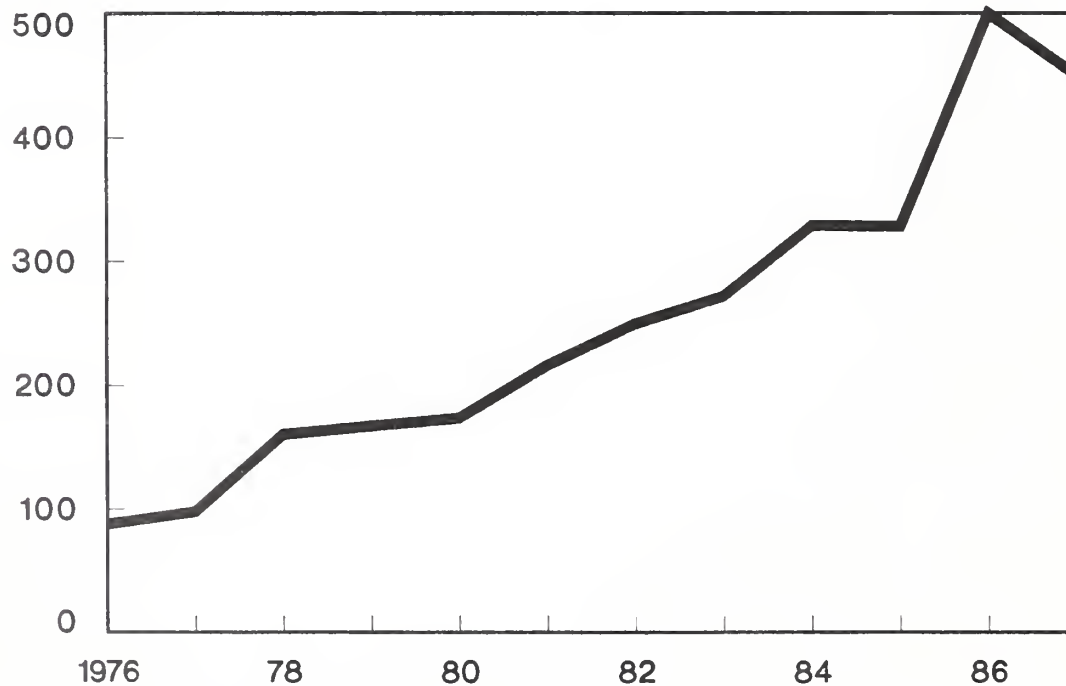
Pounds



Federally inspected.

## Beef Exports

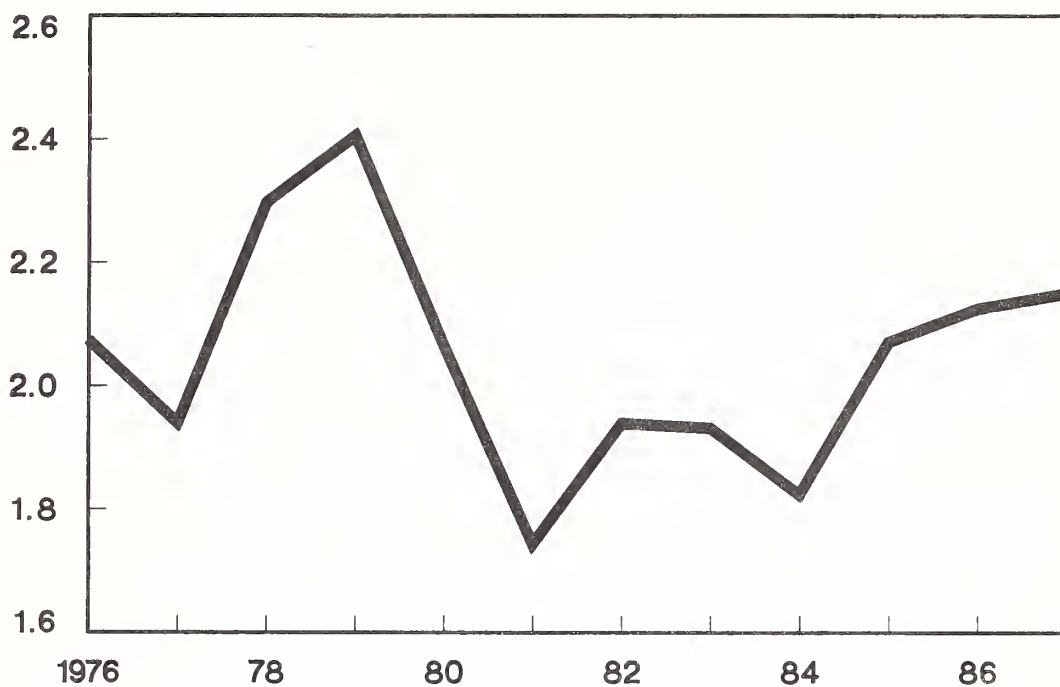
Million pounds



Carcass weight. Fourth-quarter 1986 and 1987 forecast.

## Beef Imports

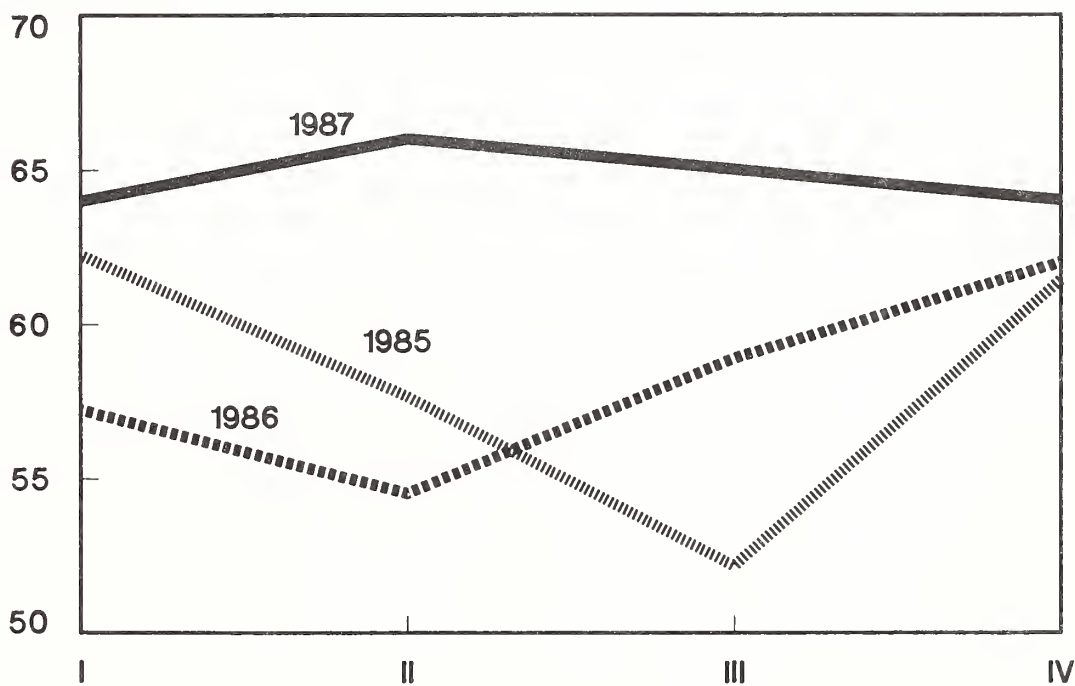
Million pounds



Carcass weight. Fourth-quarter 1986 and 1987 forecast.

## Choice Steer Prices, Omaha

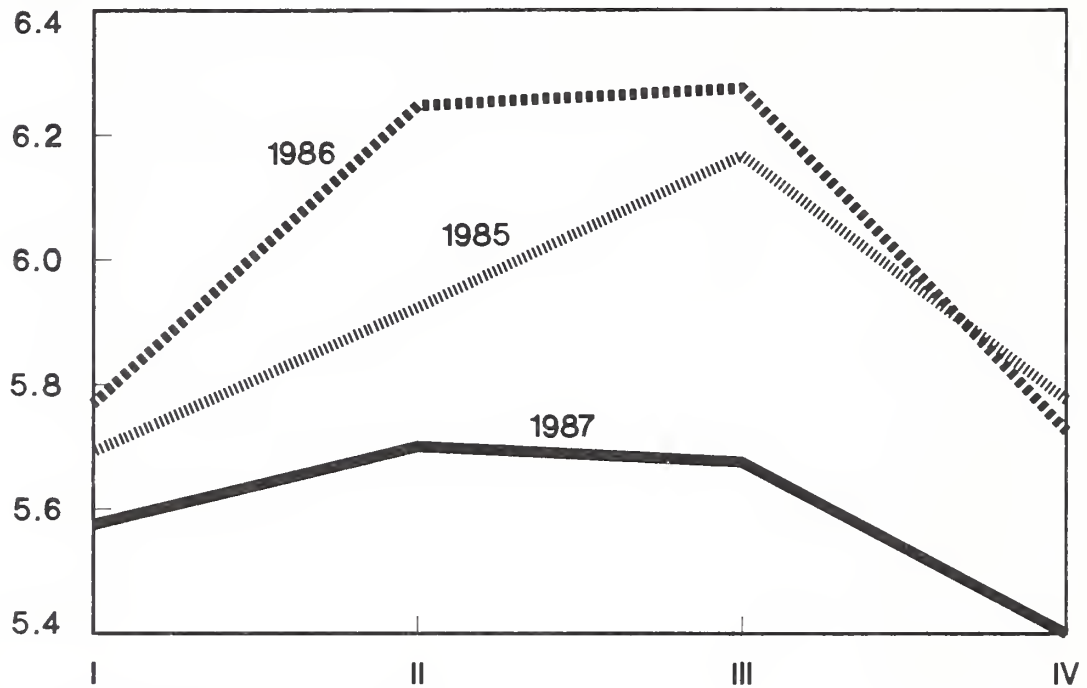
\$ per cwt



Fourth-quarter 1986 and 1987 forecast.

# Commercial Beef Production

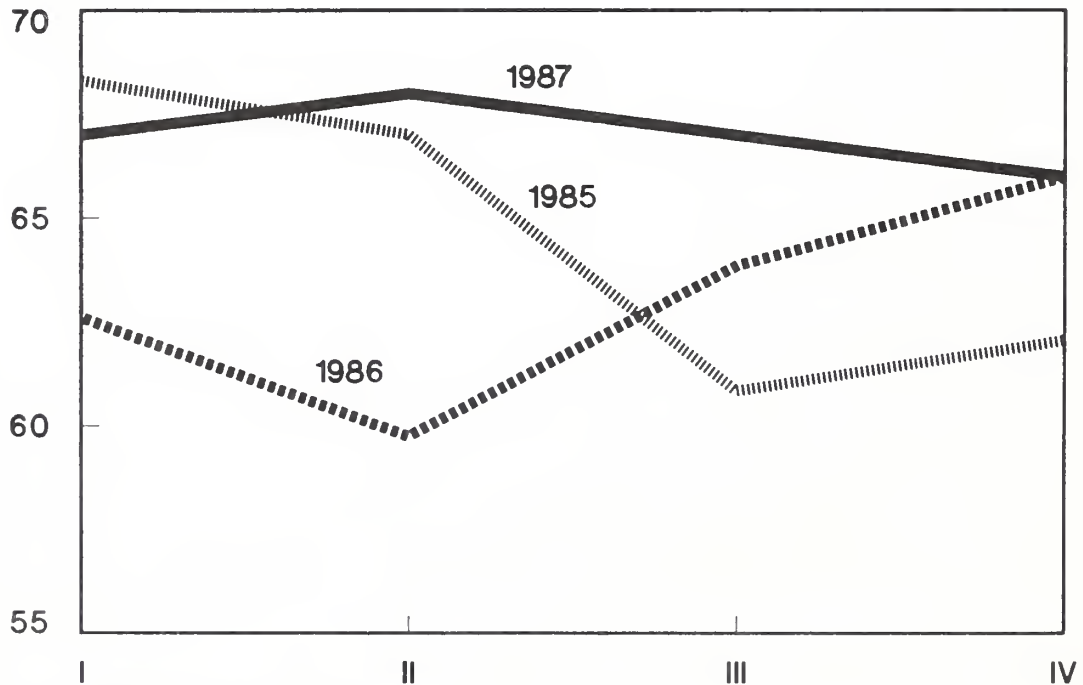
Billion pounds



Fourth-quarter 1986 and 1987 forecast.

## Medium #1 Feeder Steer Prices, Kansas City

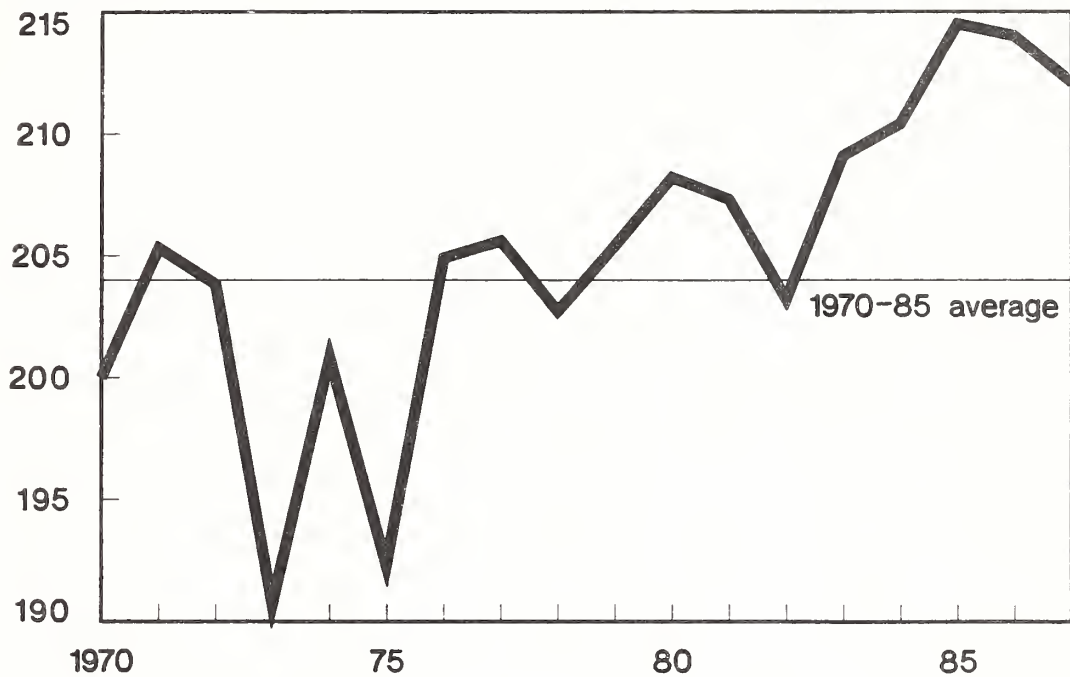
\$ per cwt



Fourth-quarter 1986 and 1987 forecast.

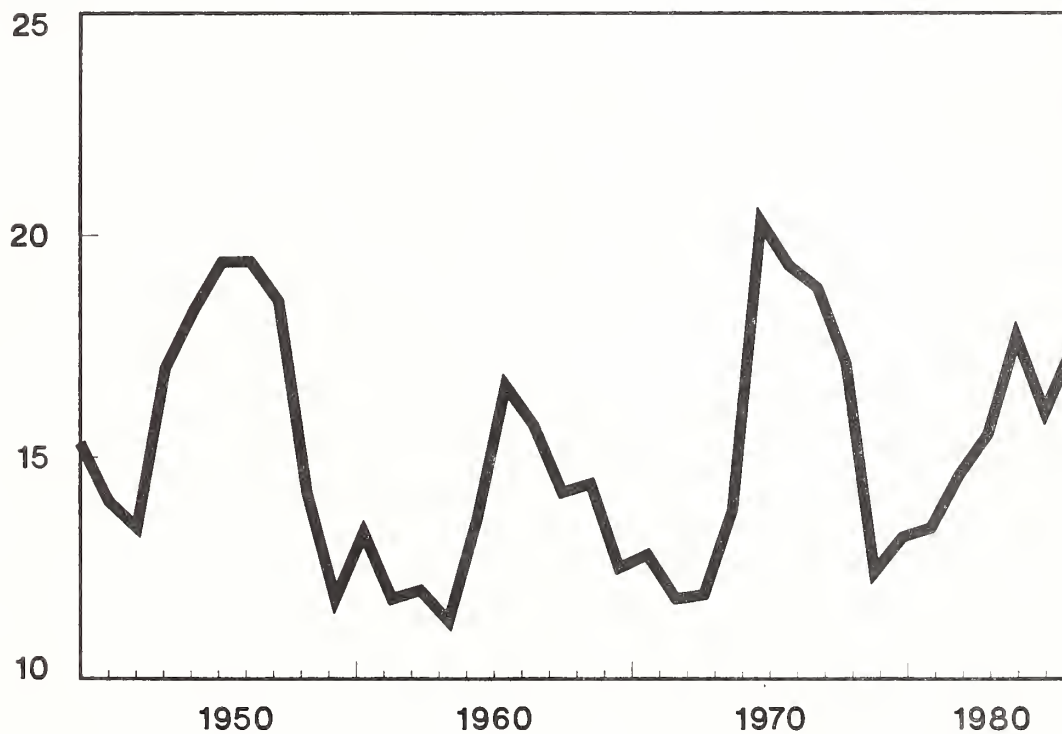
## Per Capita Red Meat and Poultry Consumption

Pounds

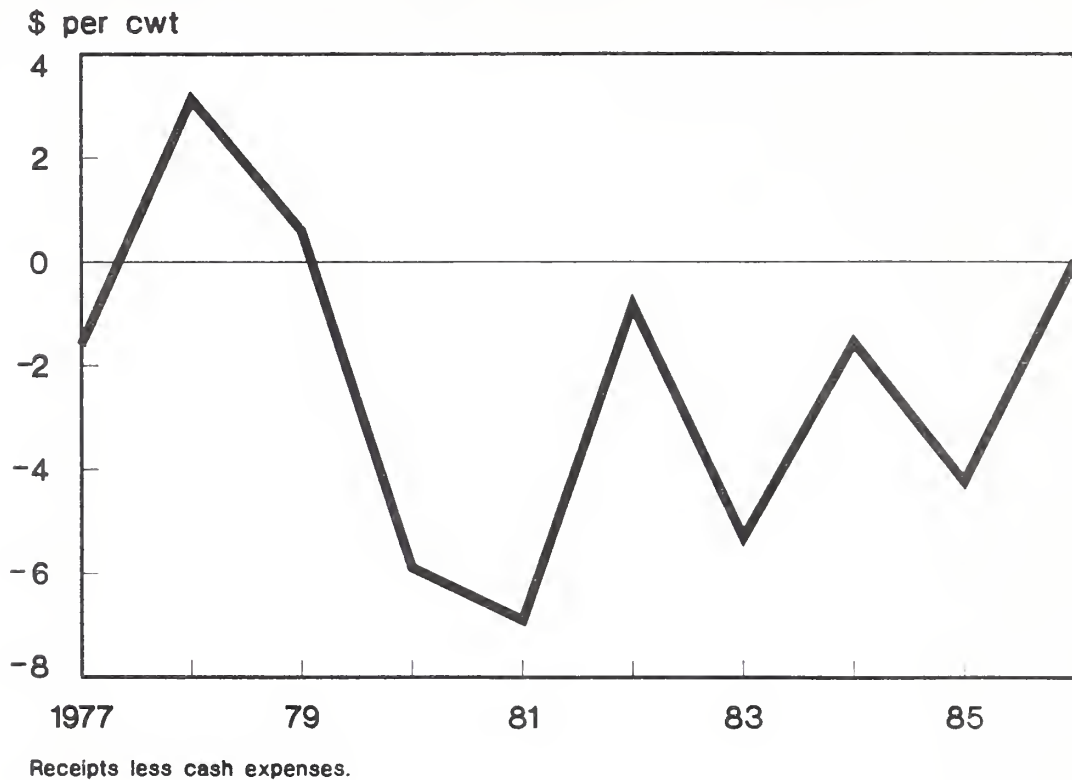


## Percent of Cow Herd Slaughtered

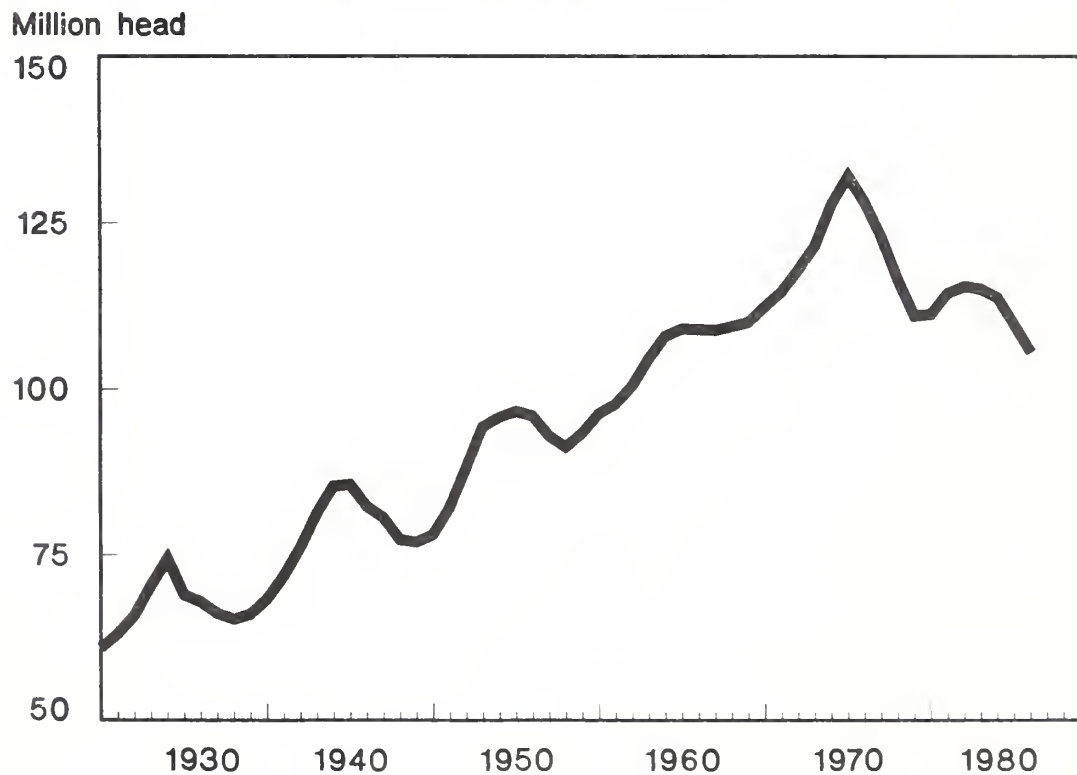
Percent



## Returns to U.S. Fed Beef Producers



## U.S. Cattle and Calf Inventory





## Beef Prices and Consumption

Year	Per capita consumption	ERS retail price
	Pounds	Dollars per pound
1979	78.0	2.26
1980	76.5	2.38
1981	77.2	2.39
1982	77.1	2.42
1983	78.7	2.38
1984	78.6	2.40
1985	79.1	2.33
1986	79.2	2.32
1987	74.1	2.42
% change	-6	+4

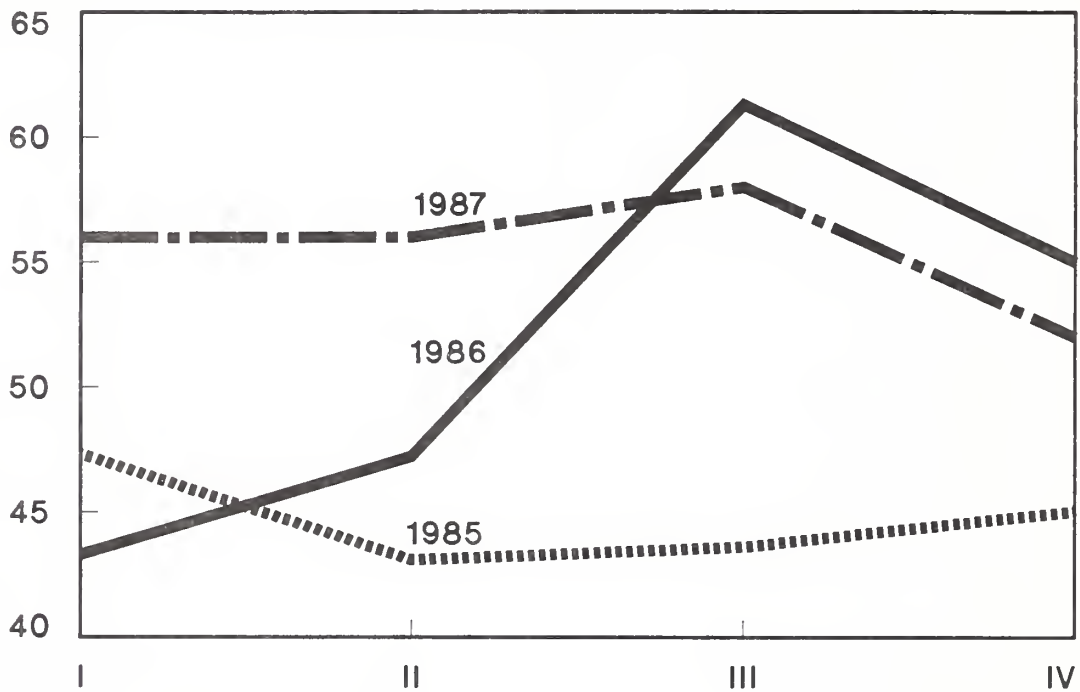
## Feeder Cattle Supply

	1983	1984	1985	1986	1986/85
		1,000 head			% change
Calves less than 500 lb.:					
On farms July 1	35,970	35,500	33,600	32,200	-4.2
Slaughter July-Sept.	805	856	872	859	-1.5
On feed Oct. 1	367	495	289	310	7.3
Subtotal	34,798	34,149	32,439	31,031	-4.4
Steers and heifers 500 lb. and over:					
On farms July 1	24,730	24,450	24,200	23,300	-3.7
Slaughter July-Sept.	7,421	7,174	7,465	7,521	2.5
On feed Oct. 1	9,334	9,999	8,964	9,314	3.9
Subtotal	7,775	7,277	7,771	6,465	-16.8
Total supply	42,573	41,426	40,210	37,496	-6.8



## Barrow and Gilt Prices, Seven Markets

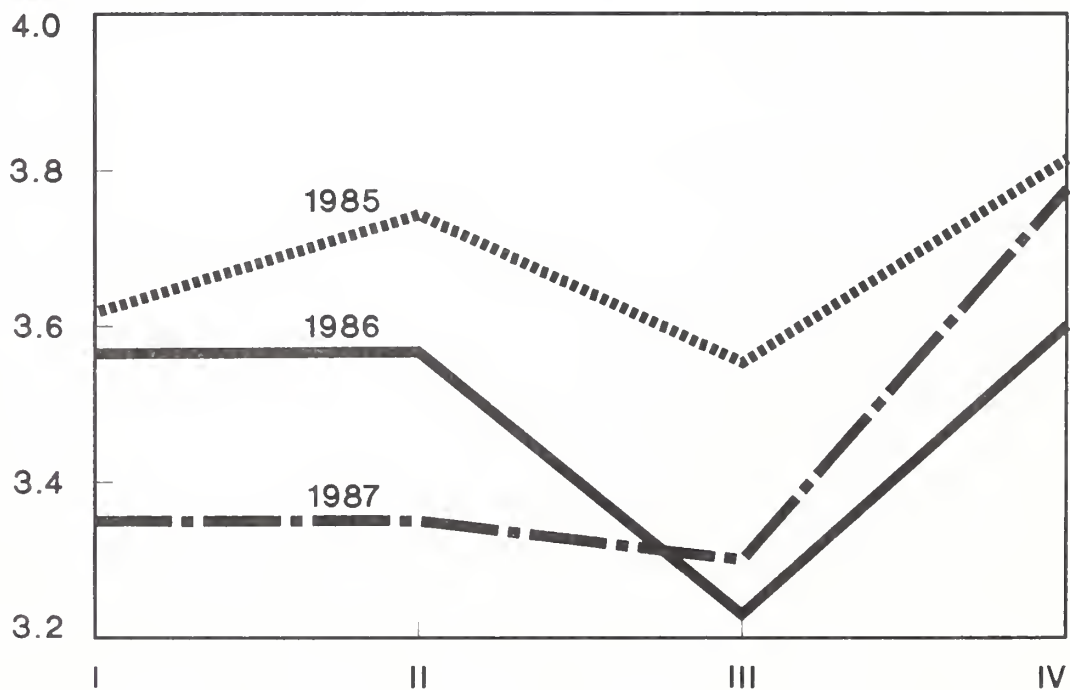
\$ per cwt



Fourth-quarter 1986 and 1987 estimated.

## Commercial Pork Production

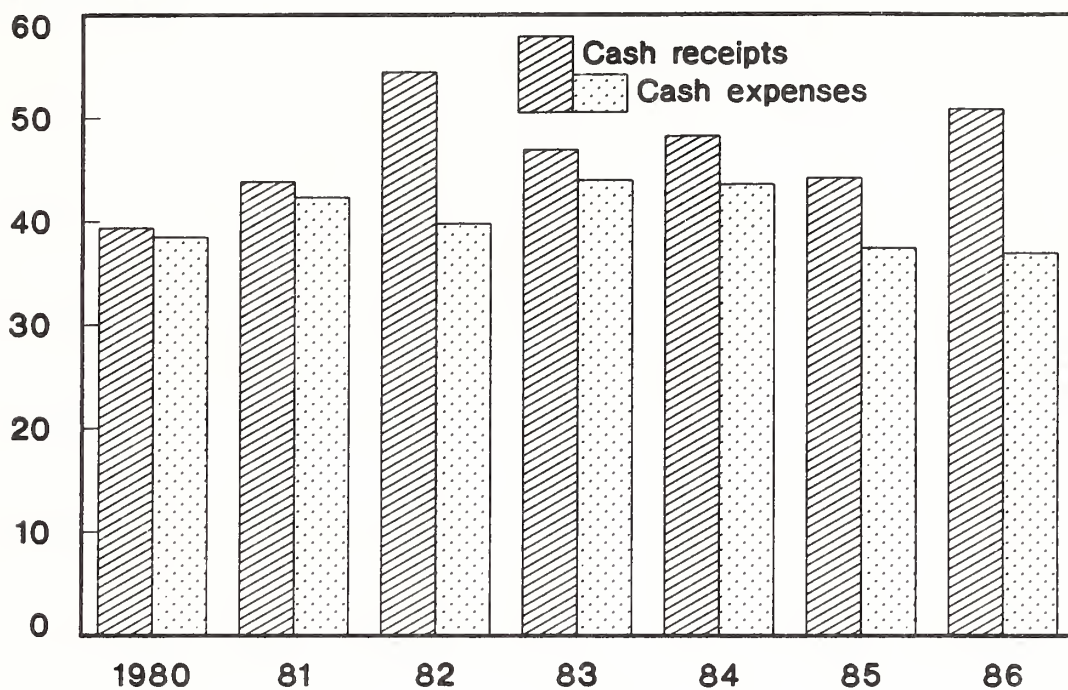
Billion pounds



Fourth-quarter 1986 and 1987 estimated.

## Farrow to Finish Costs of Production

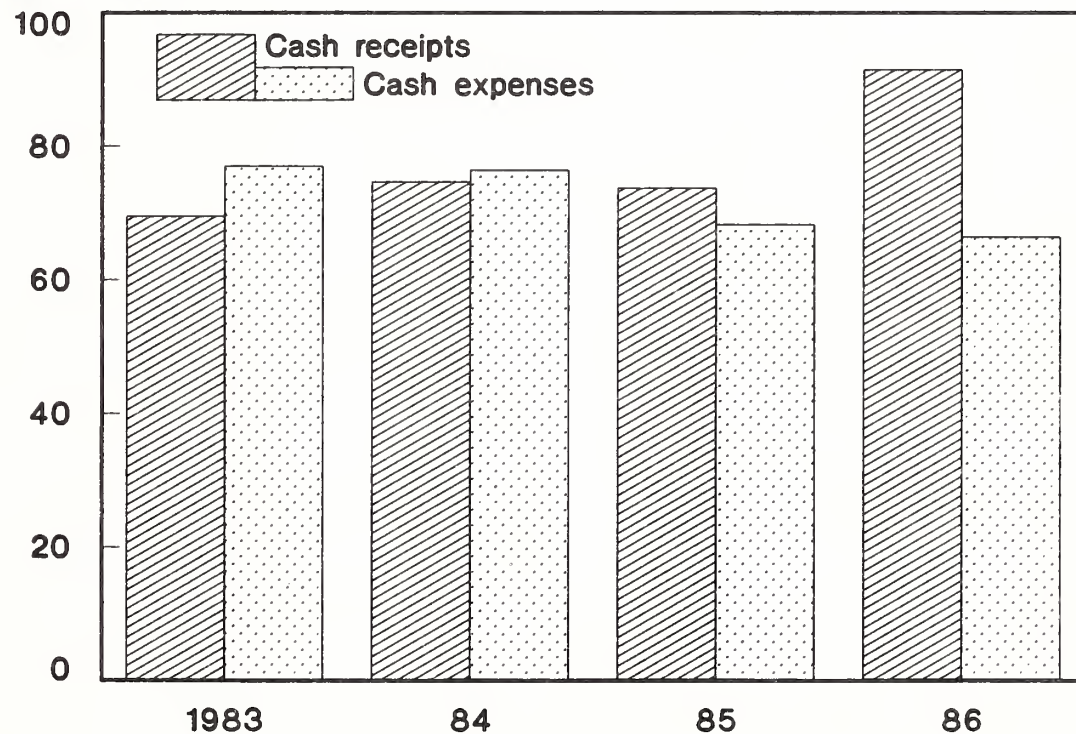
\$ per cwt



North Central region.

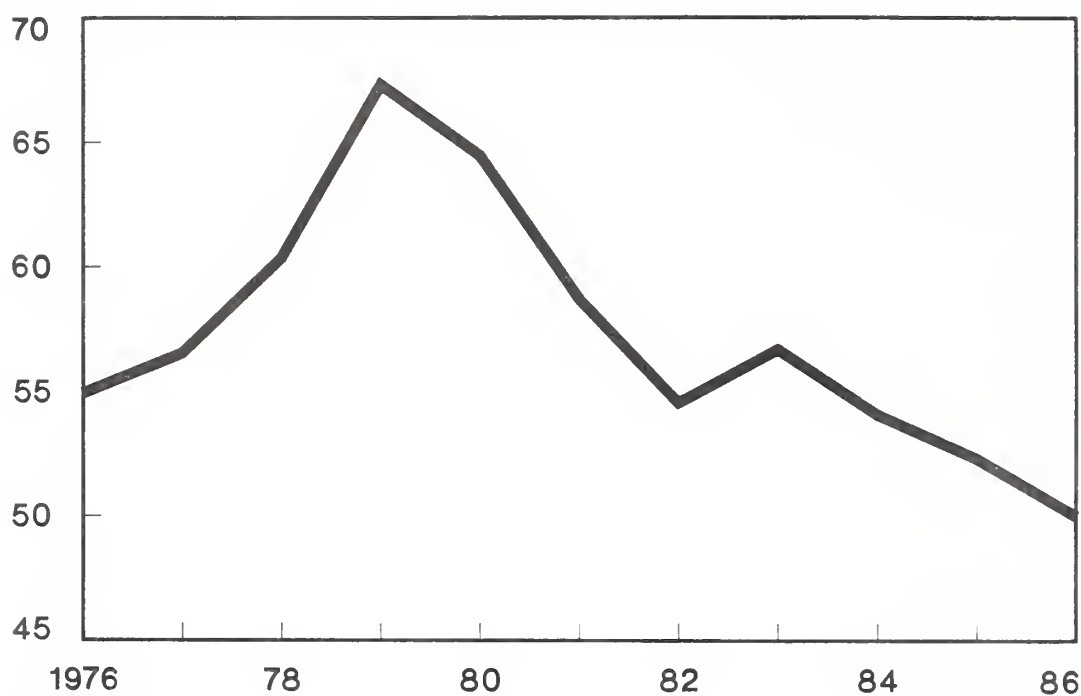
## Feeder Pig Production Costs

\$ per cwt



## Hogs and Pigs Inventory, December 1

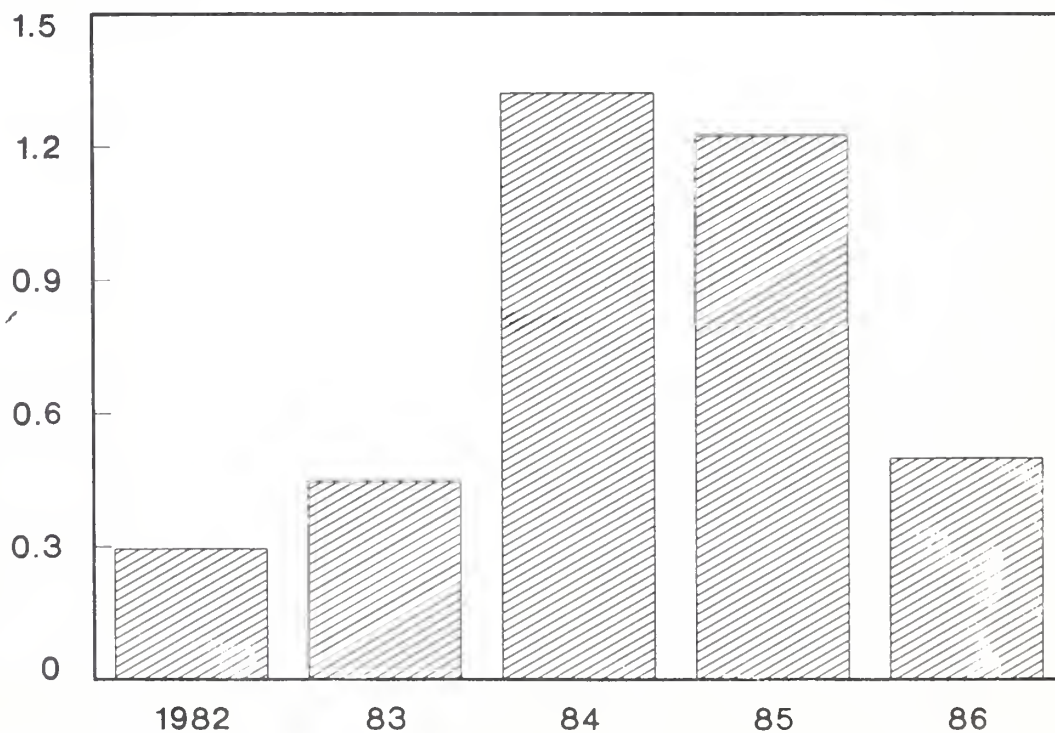
Million head



1986 estimated.

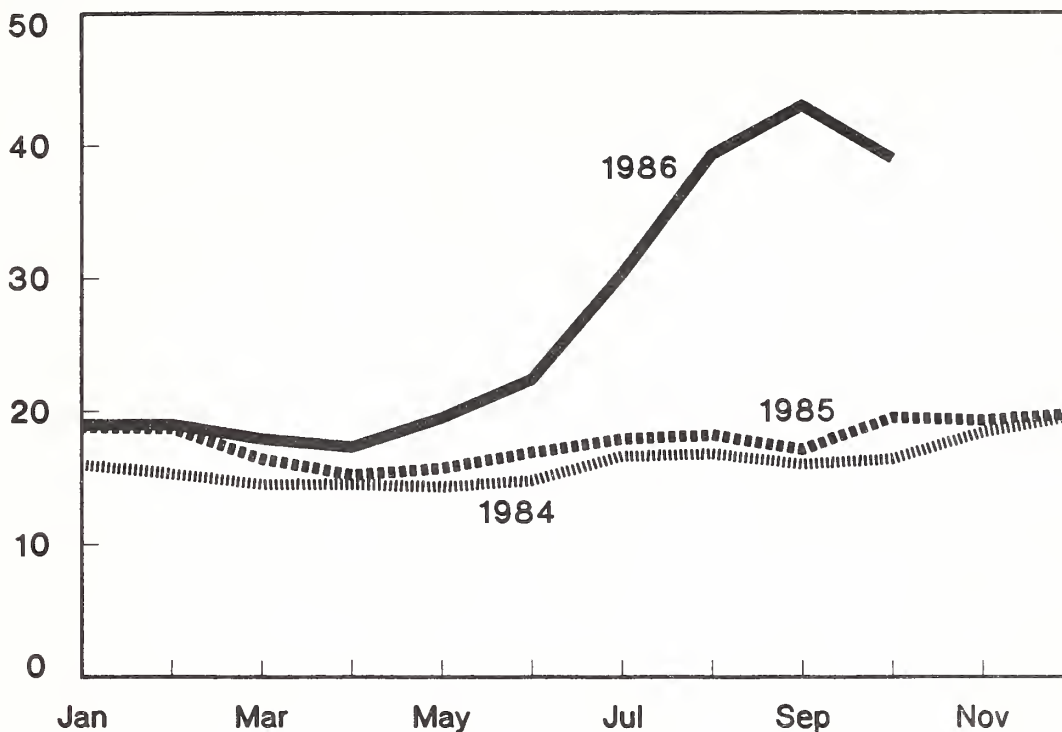
## Live Hogs Imported from Canada

Million head



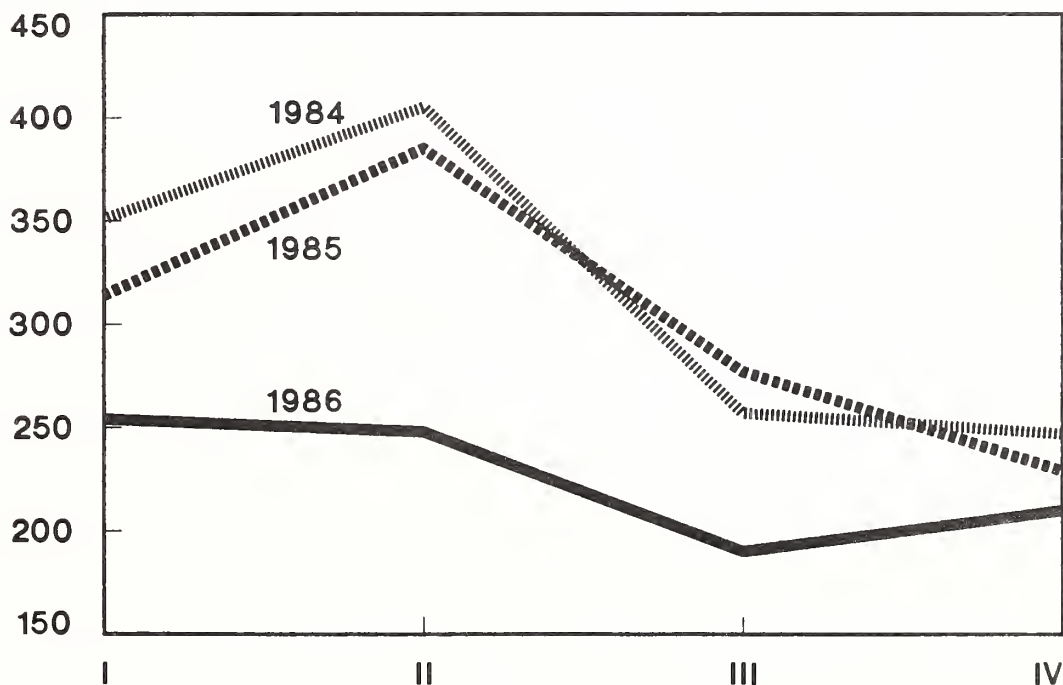
## Omaha Hog/Corn Price Ratio

Ratio



## Pork Cold Storage Stocks

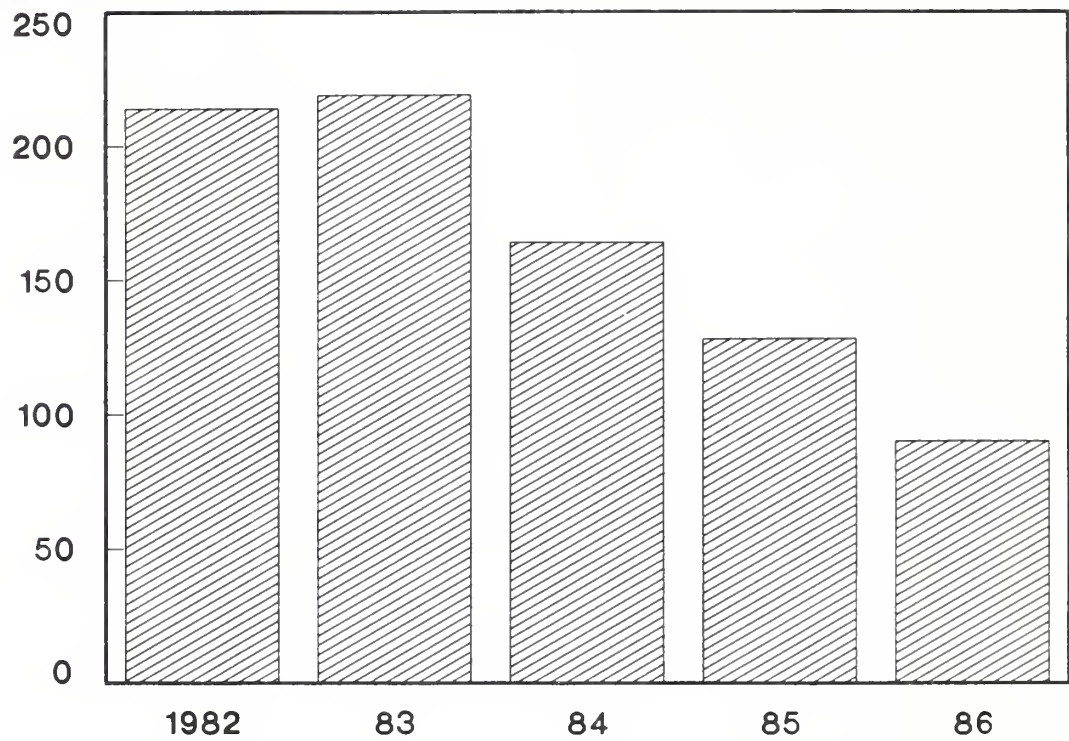
Million pounds



End of quarter. Fourth-quarter 1986 estimated.

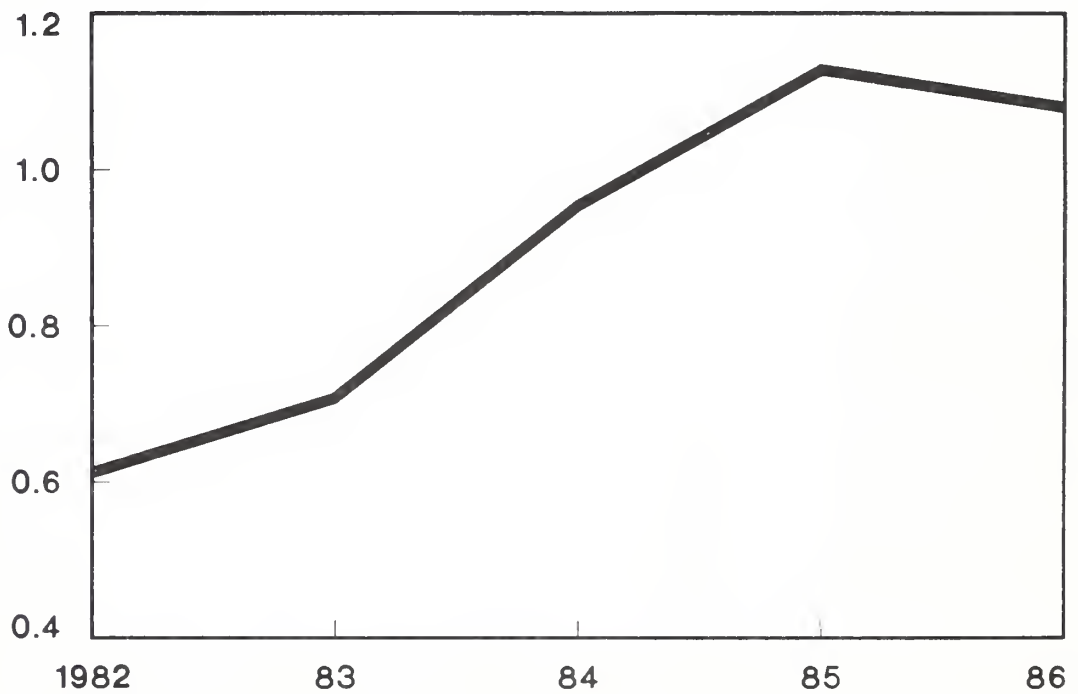
## Pork Exports

Million pounds



## Pork Product Imports

Billion pounds

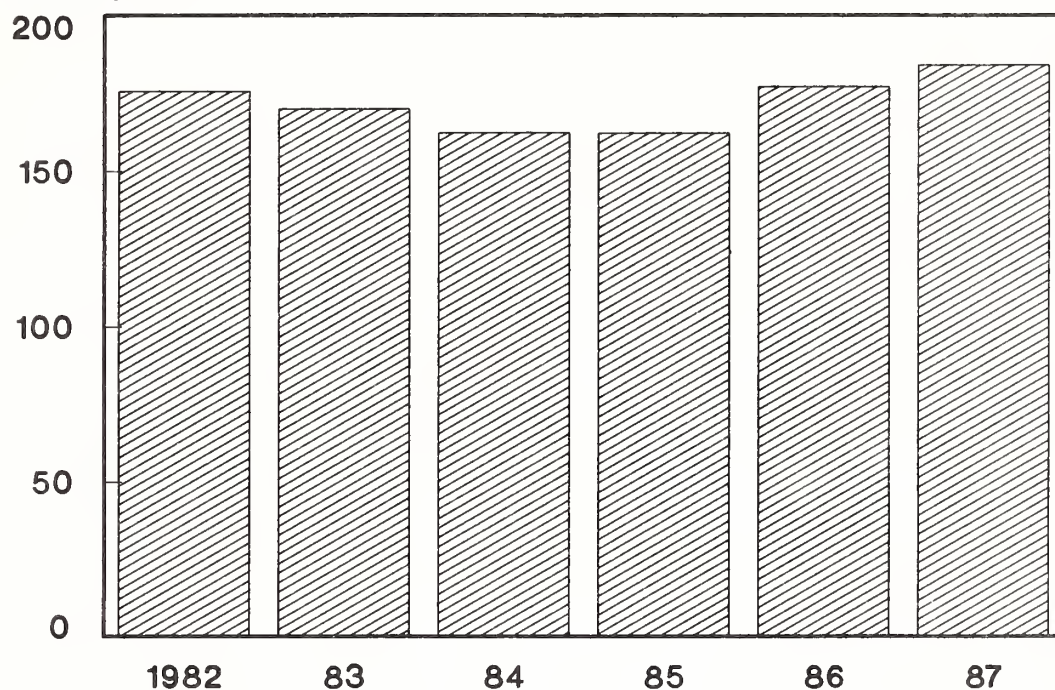


Carcass weight.



## Retail Pork Prices

Cents per lb.

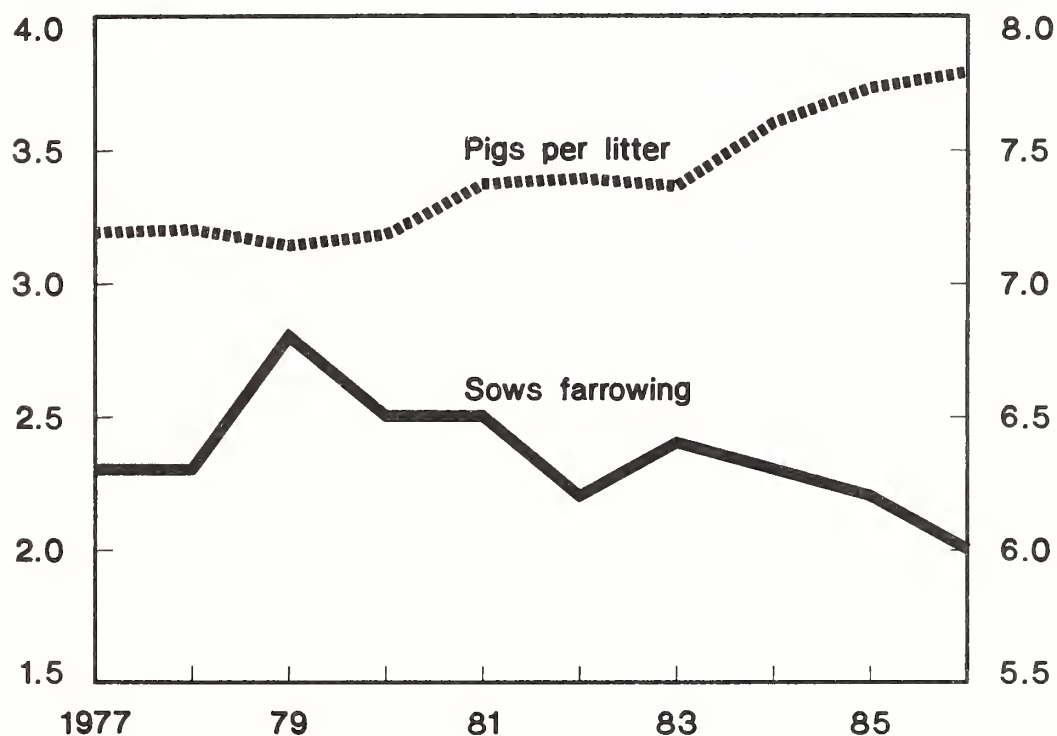


1986 and 1987 estimated.

## Sows Farrowing and Litter Rates (June-Aug.)

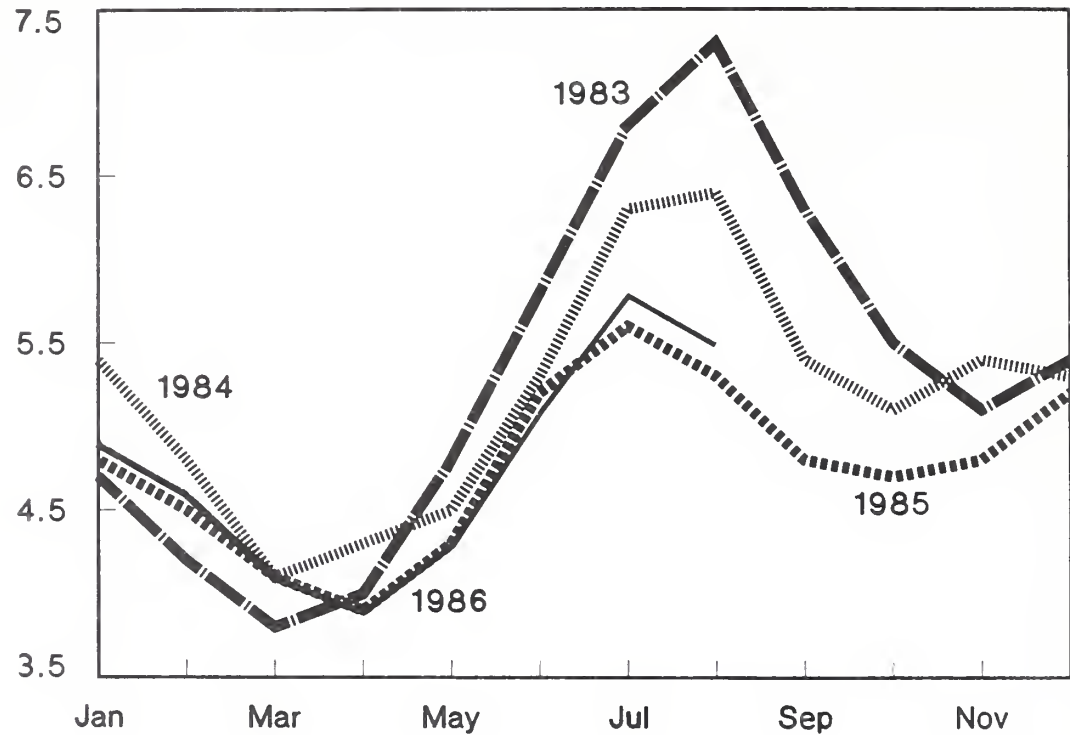
Million head

Number



## Sow Slaughter/Hog Slaughter Ratio

Percent

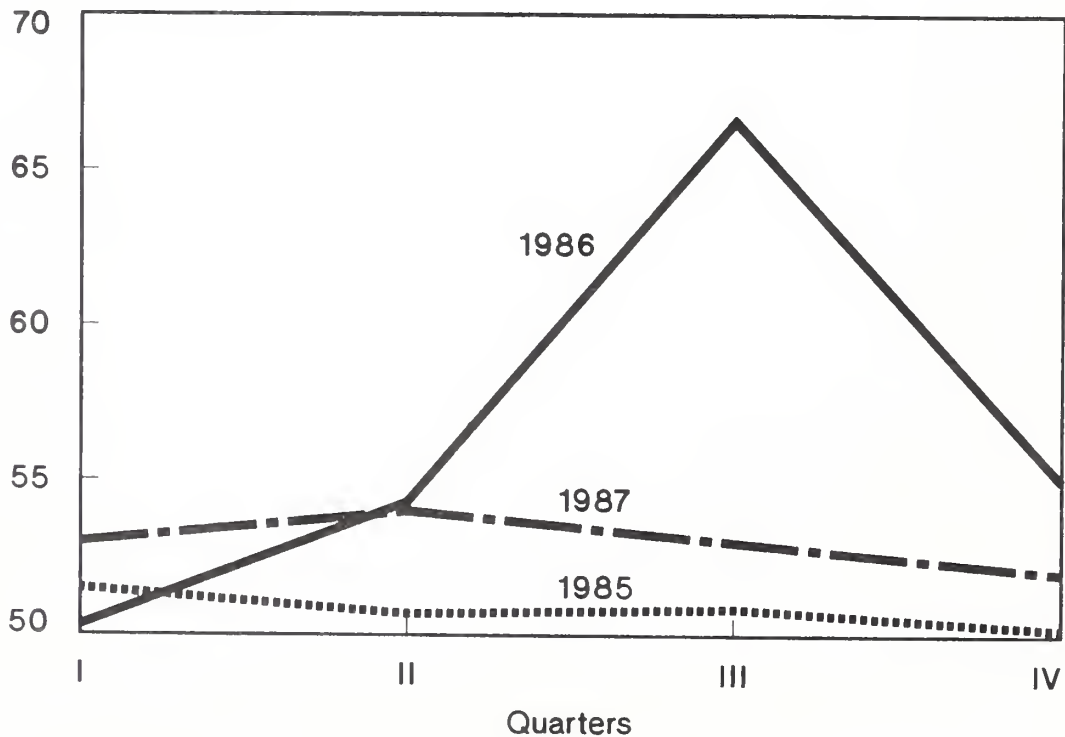


Outlook for Poultry and Eggs

Allen J. Baker

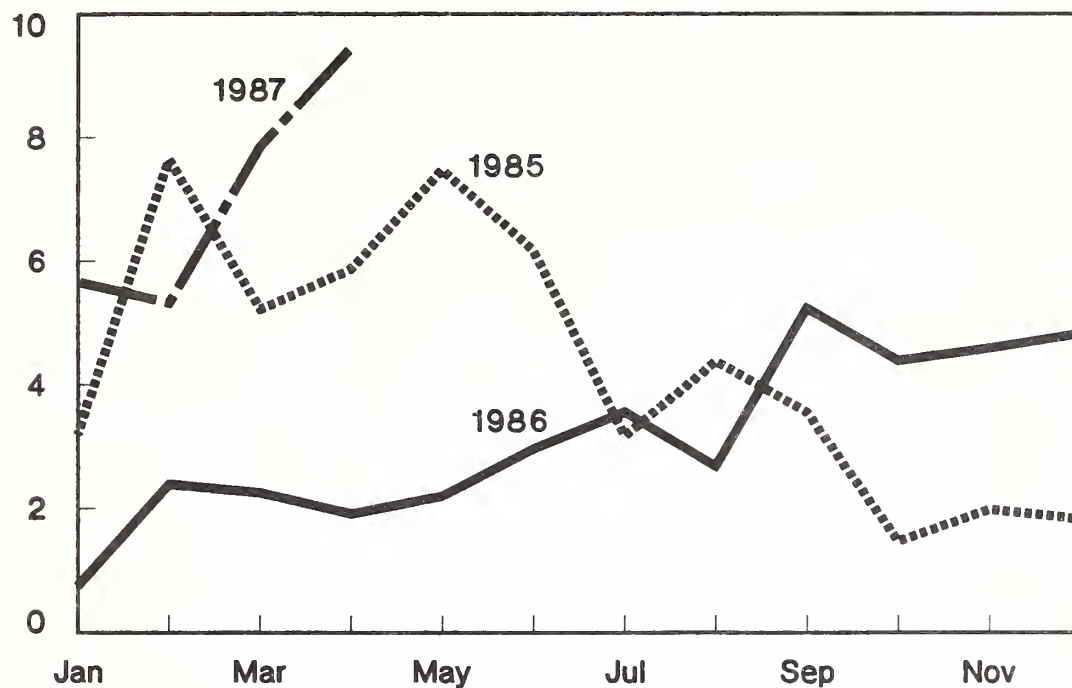
## 12-City Composite Broiler Price

Cents per pound



## Broiler Placements, 7-14 Months Earlier

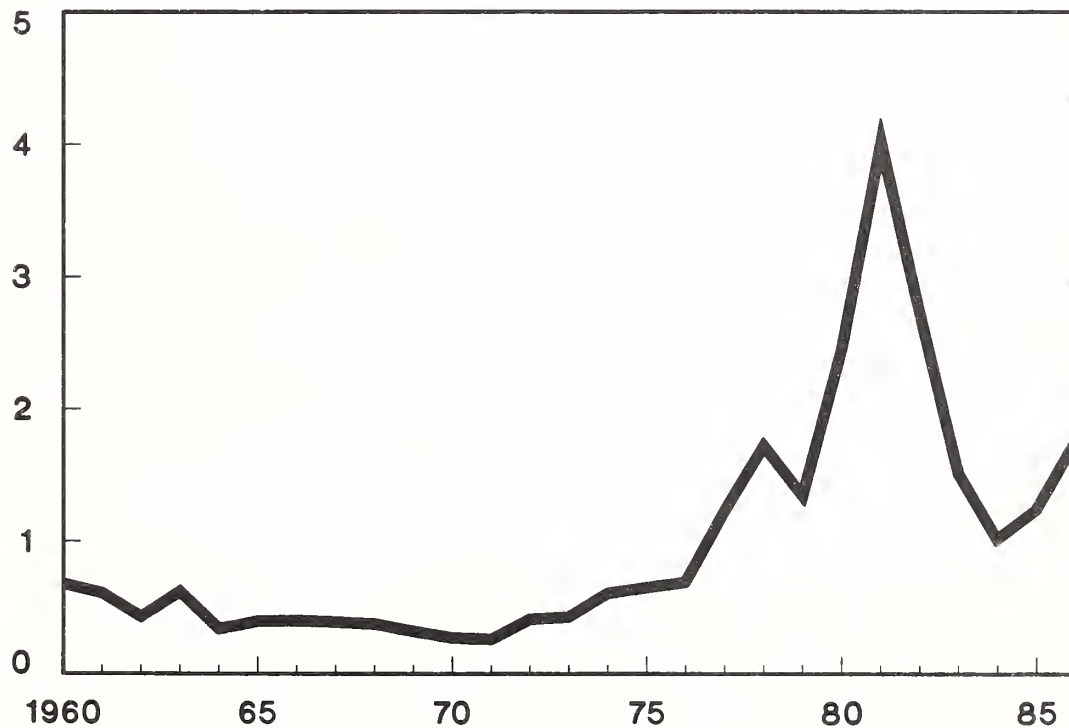
Percent



For hatchery supply flock. Percent change from year earlier.

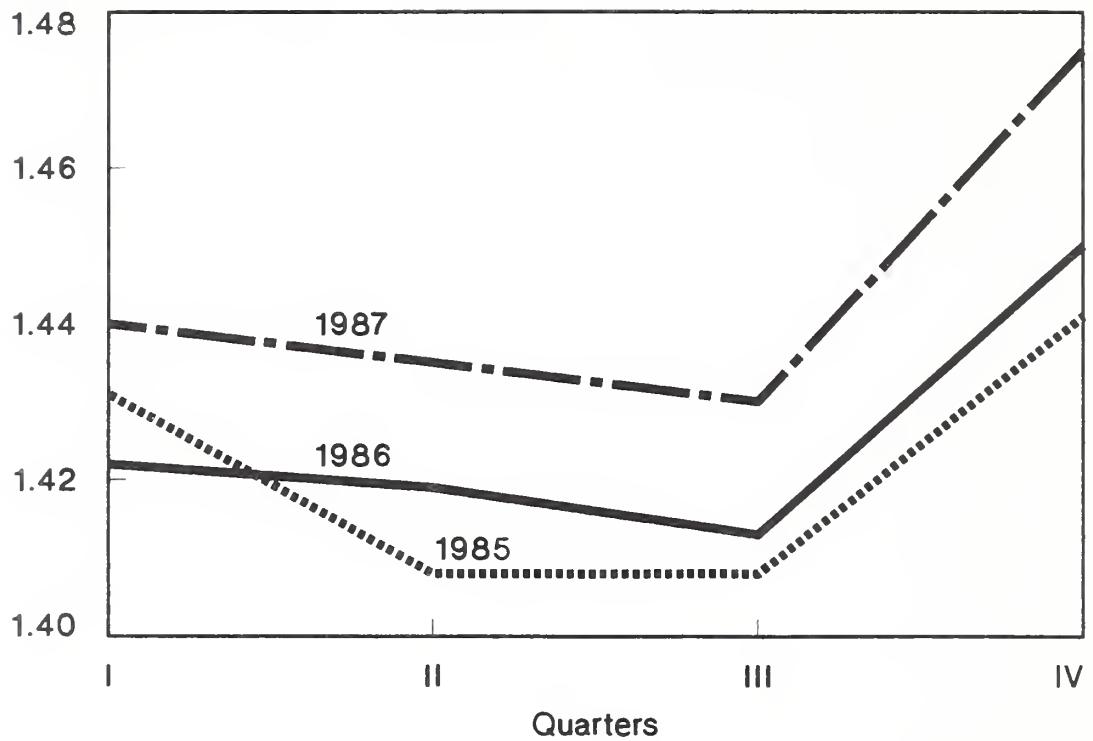
## Egg Exports as Percent of Total Production

Percent



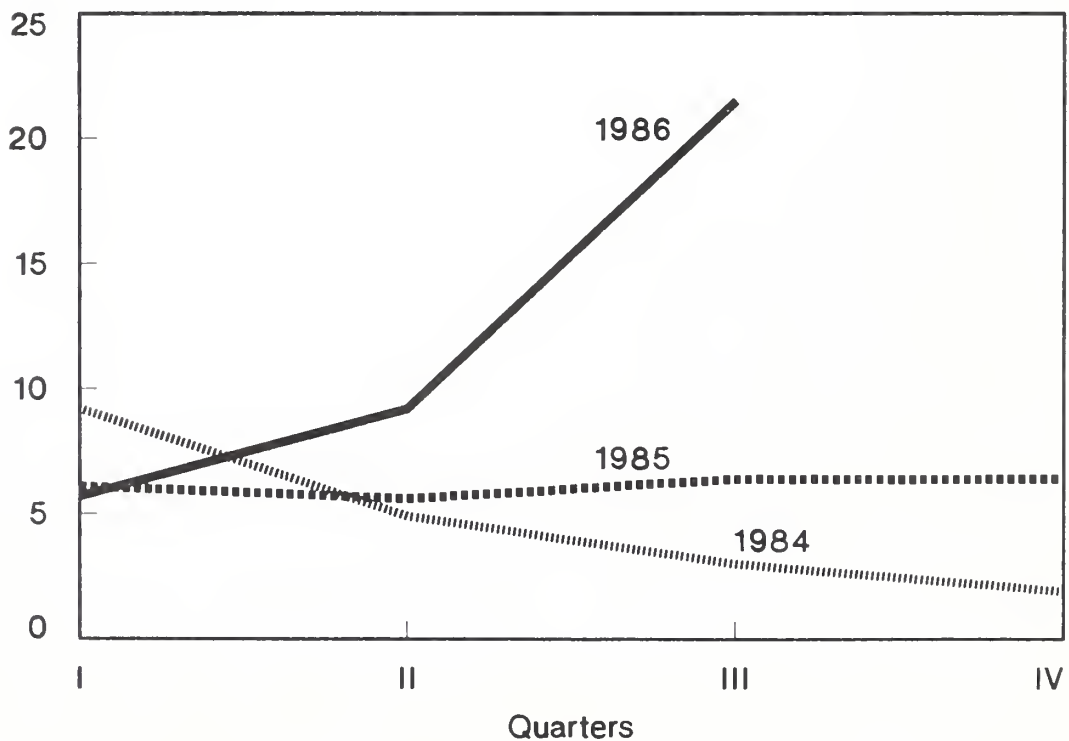
## Egg Production

Billion dozen



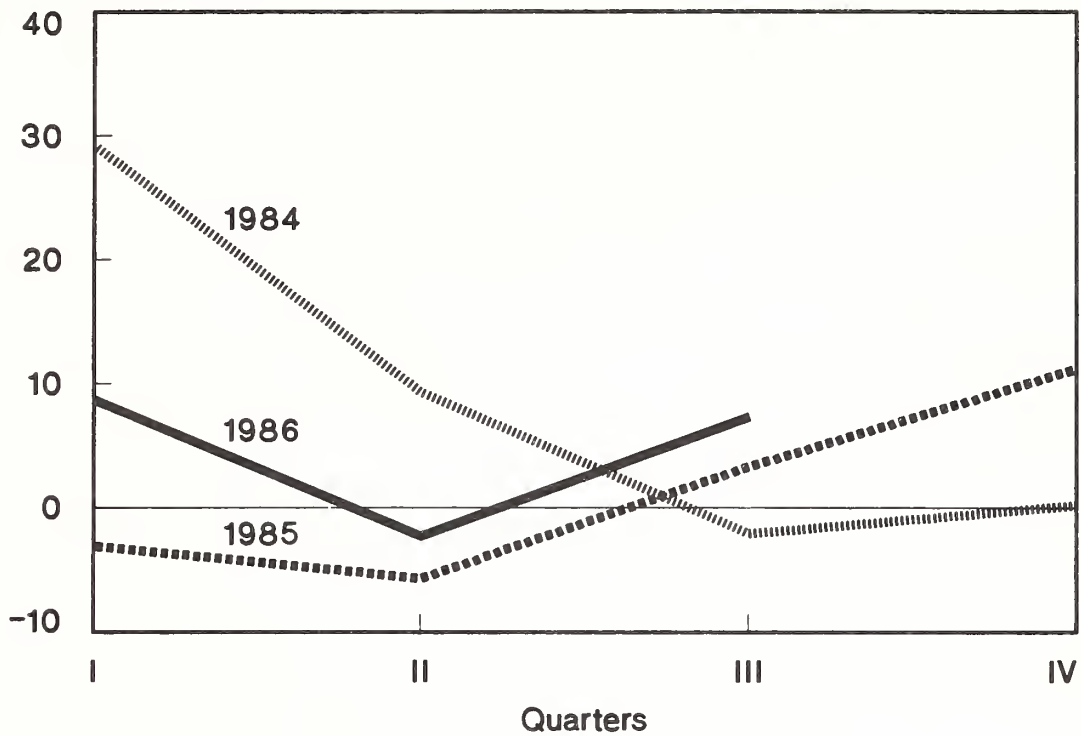
## Estimated Net Returns for Broilers

Cents per pound



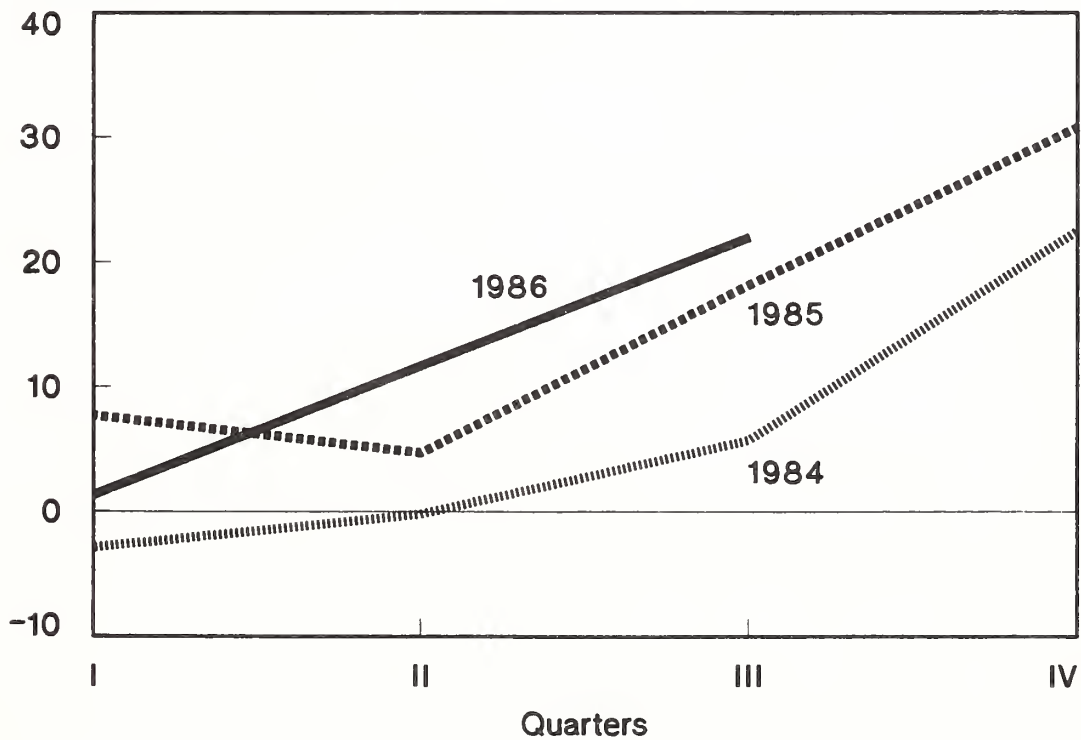
## Estimated Net Returns for Eggs

Cents per pound



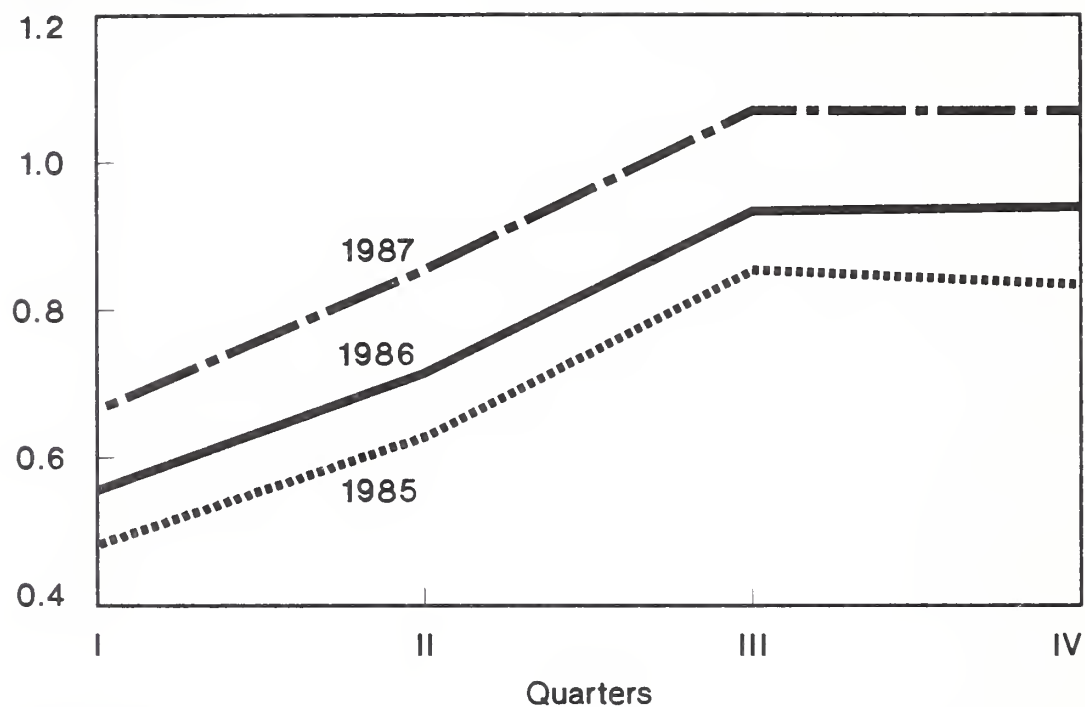
## Estimated Net Returns for Turkeys

Cents per pound



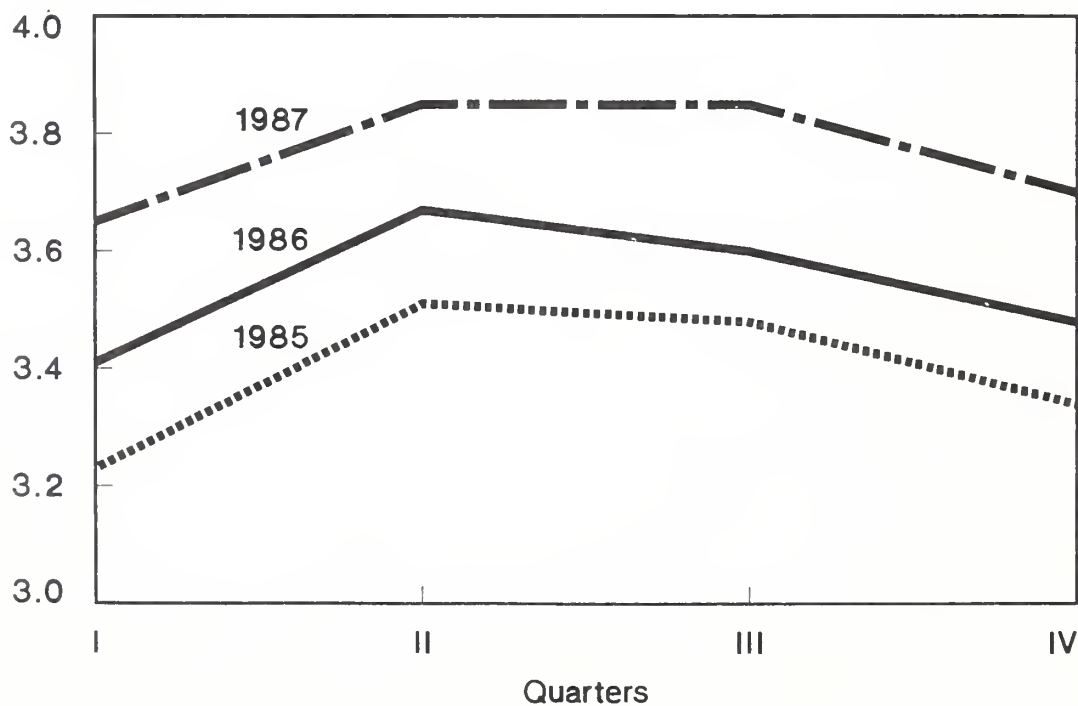
## F.I. Turkey Slaughter

Billion pounds



## F.I. Young Chicken Slaughter

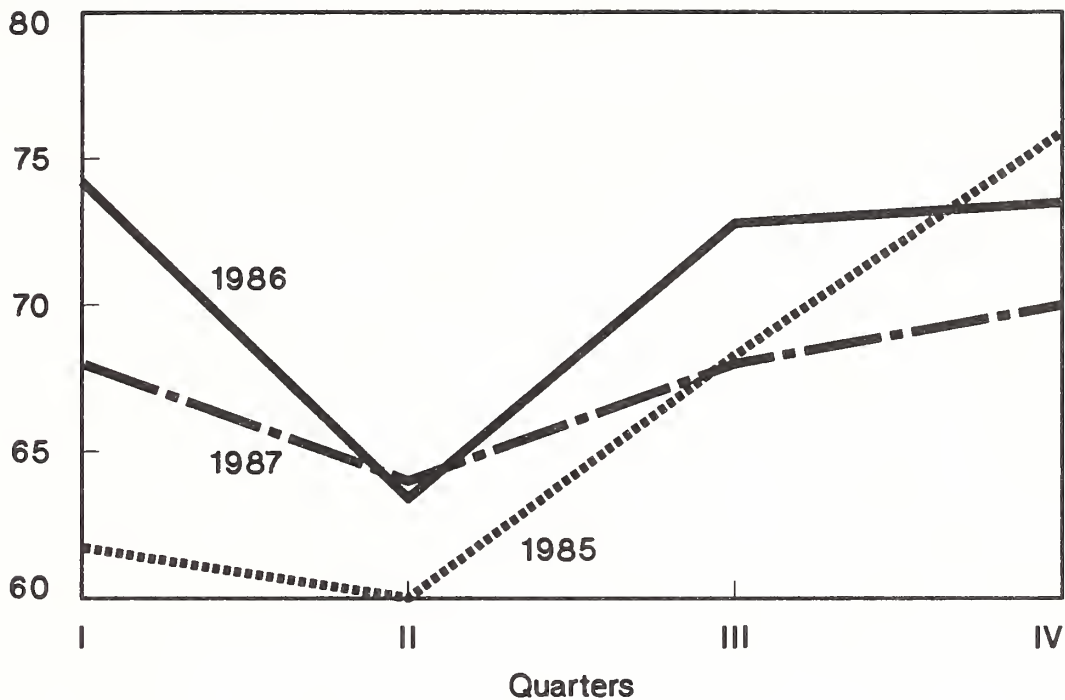
Billion pounds





## Grade A Large Egg Prices

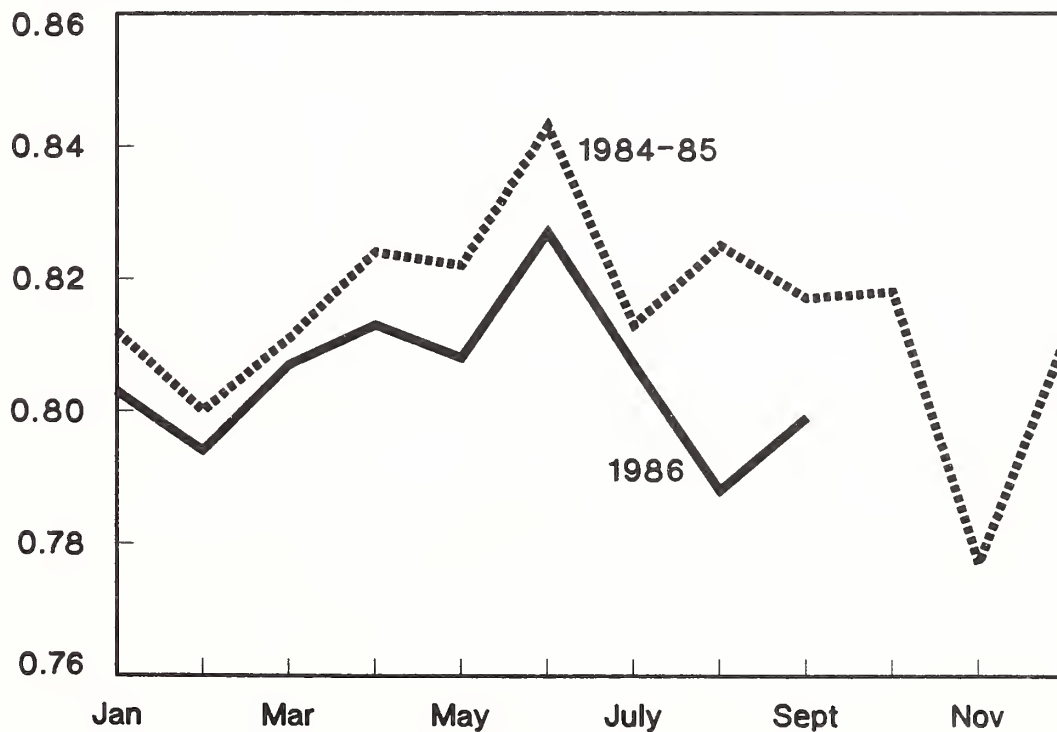
Cents per dozen



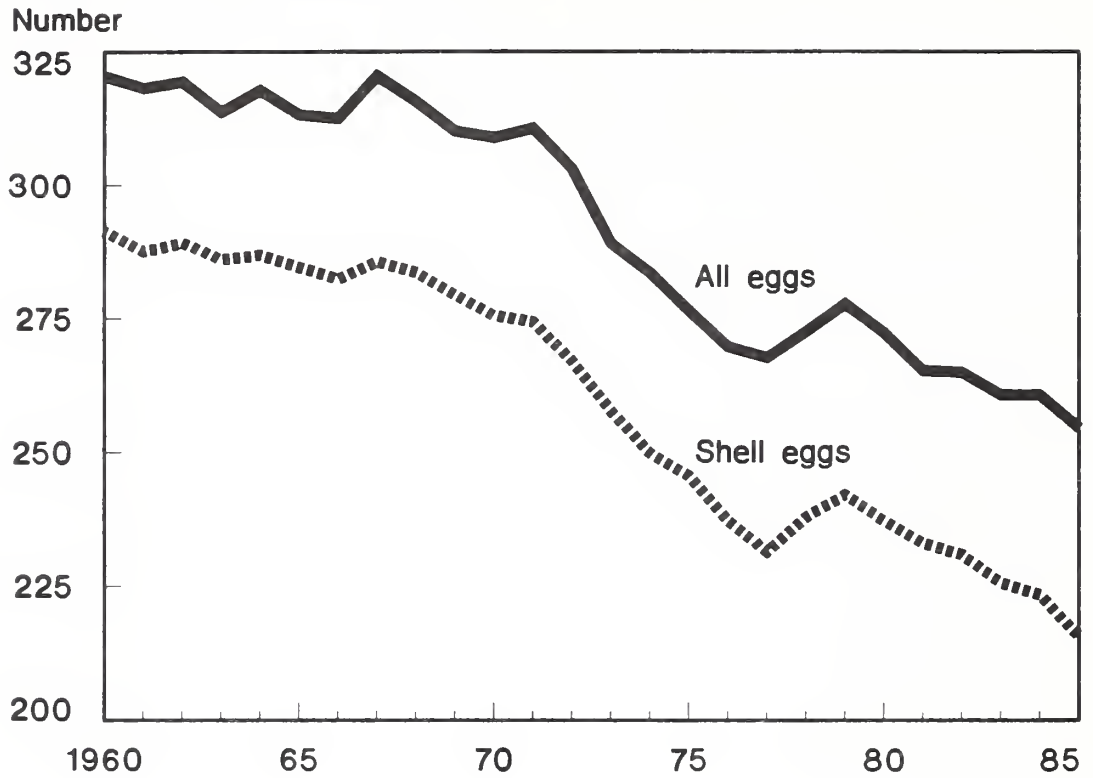
Cartoned, New York.

## Hatchability of Broiler-Type Eggs

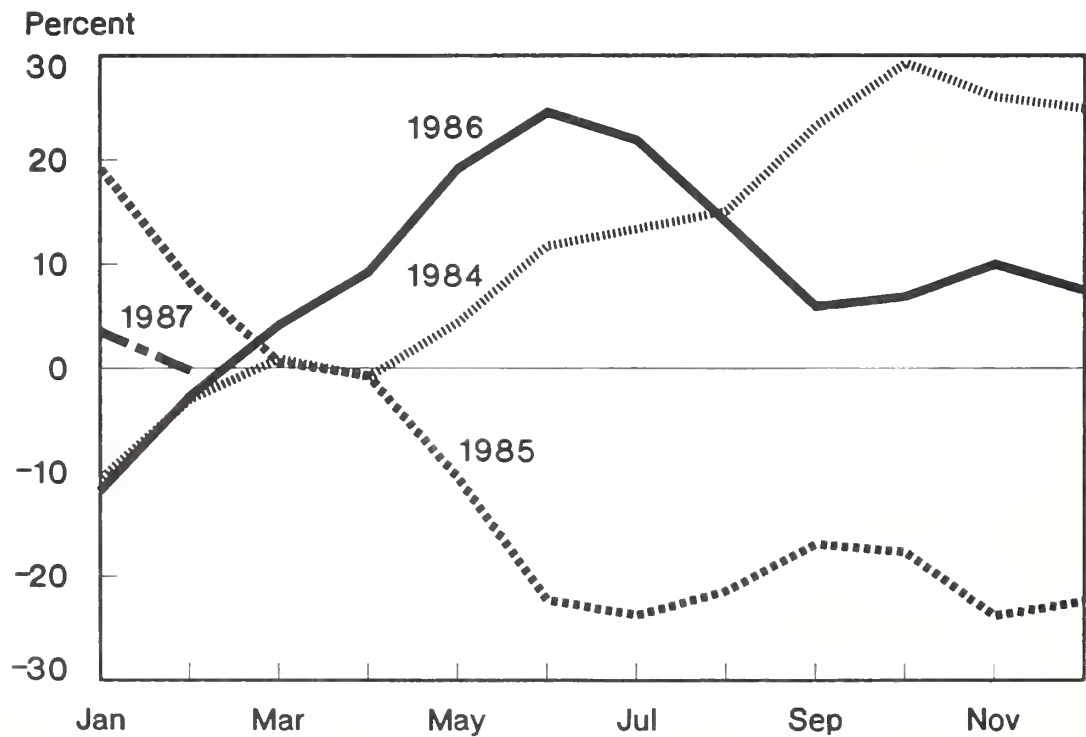
Proportion



## Per Capita Egg Disappearance



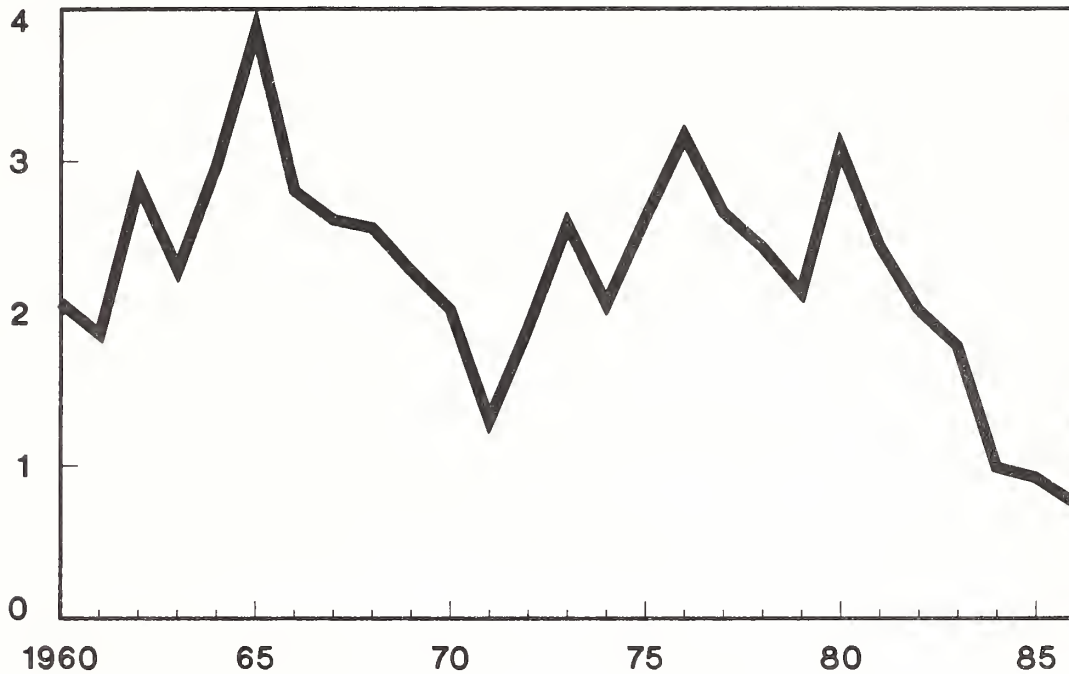
## Pullets Entering Table - Egg Flocks



Percent change from year earlier.

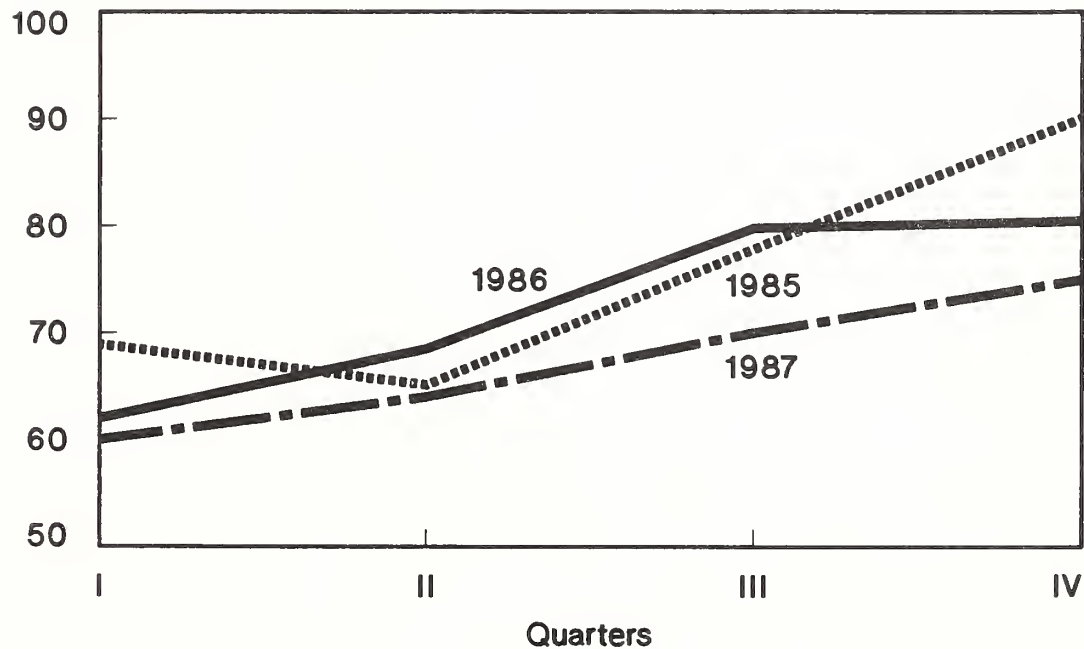
## Turkey Exports As Percent of Total Production

Percent



## Wholesale Prices for 8 to 16-Lb. Hen Turkeys

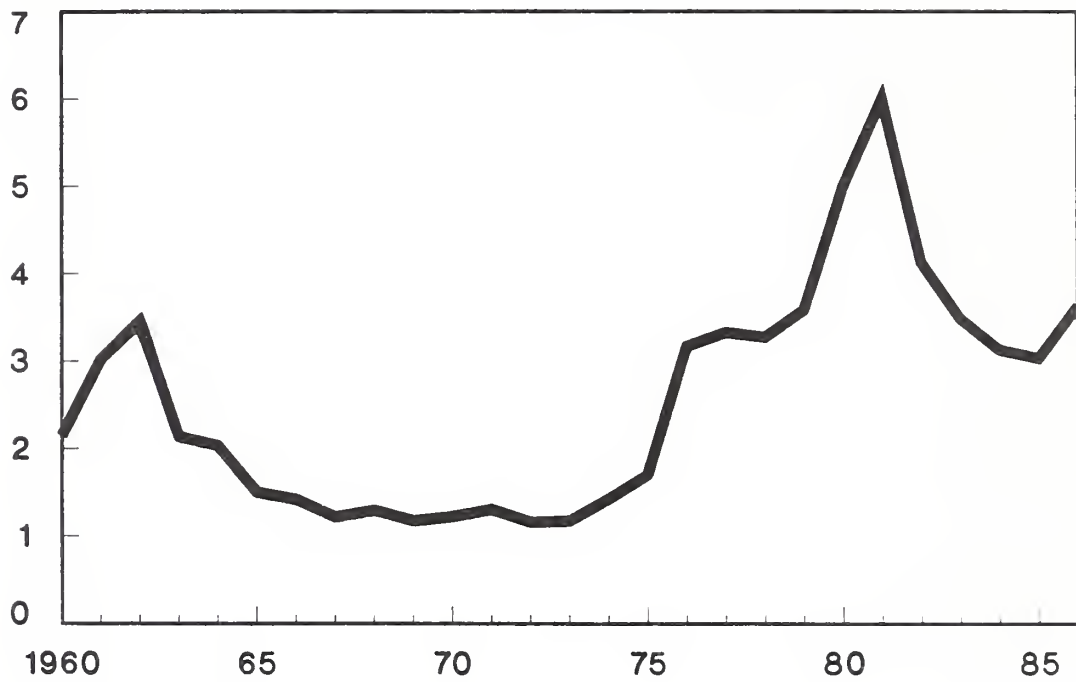
Cents per pounds



Commodity pack, eastern region.

## Young Chicken Exports As Percent of Total Production

Percent

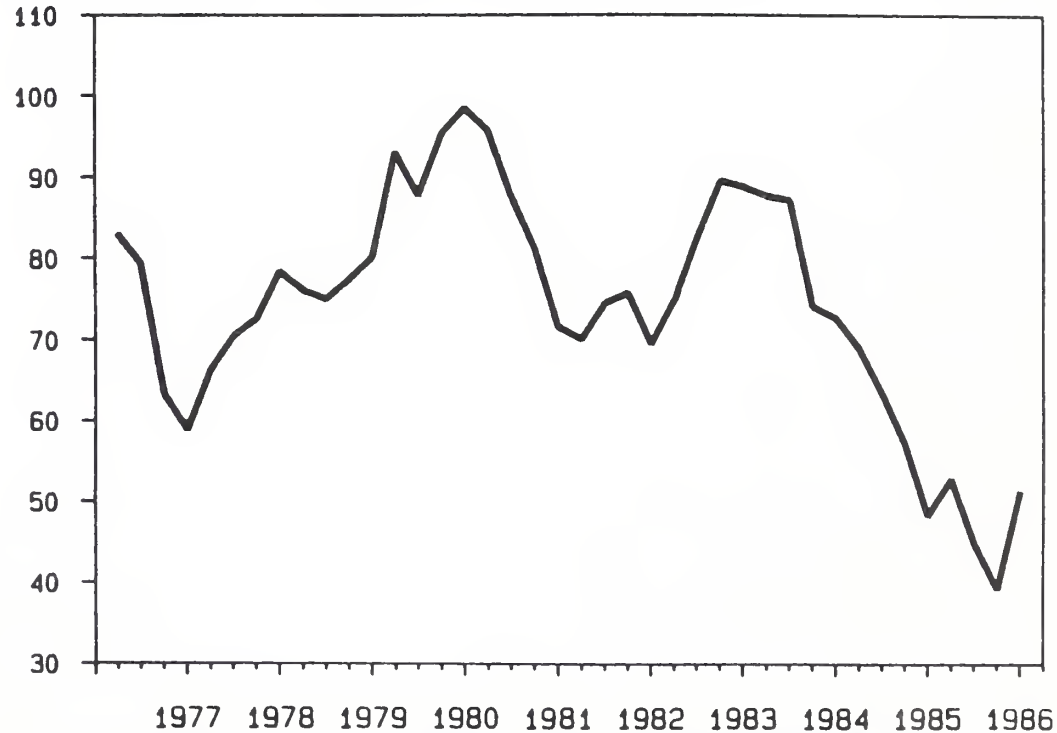


U.S. and World Cotton Outlook

Russell G. Barlowe

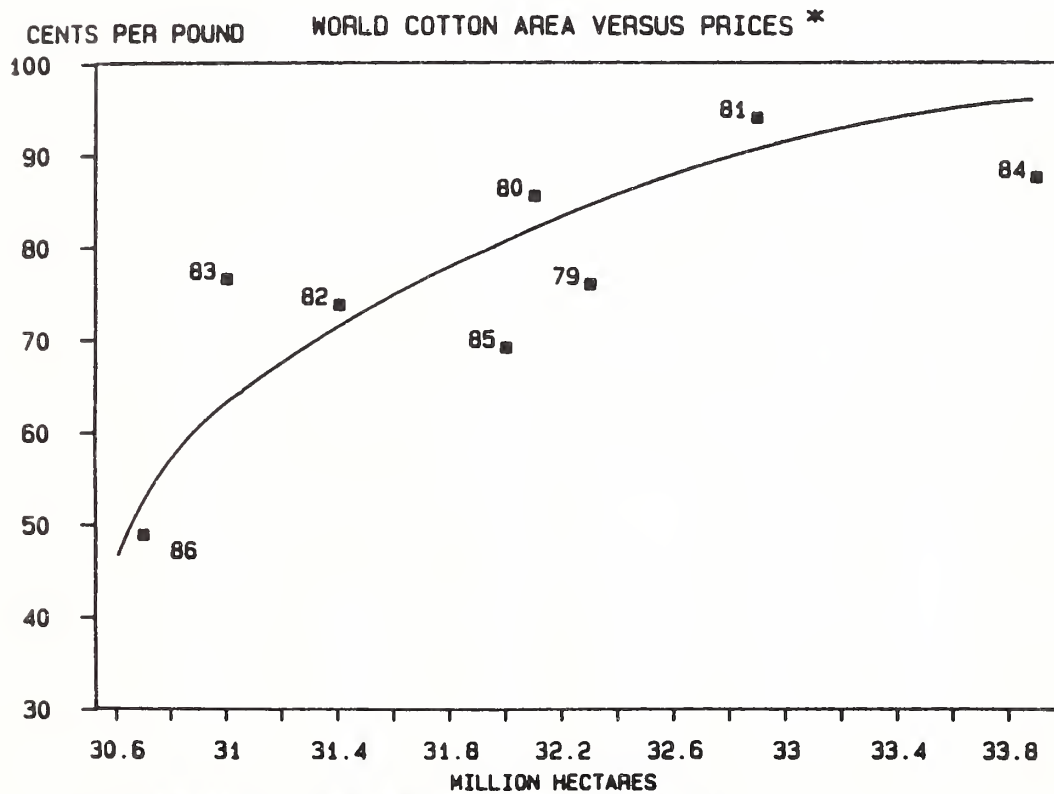
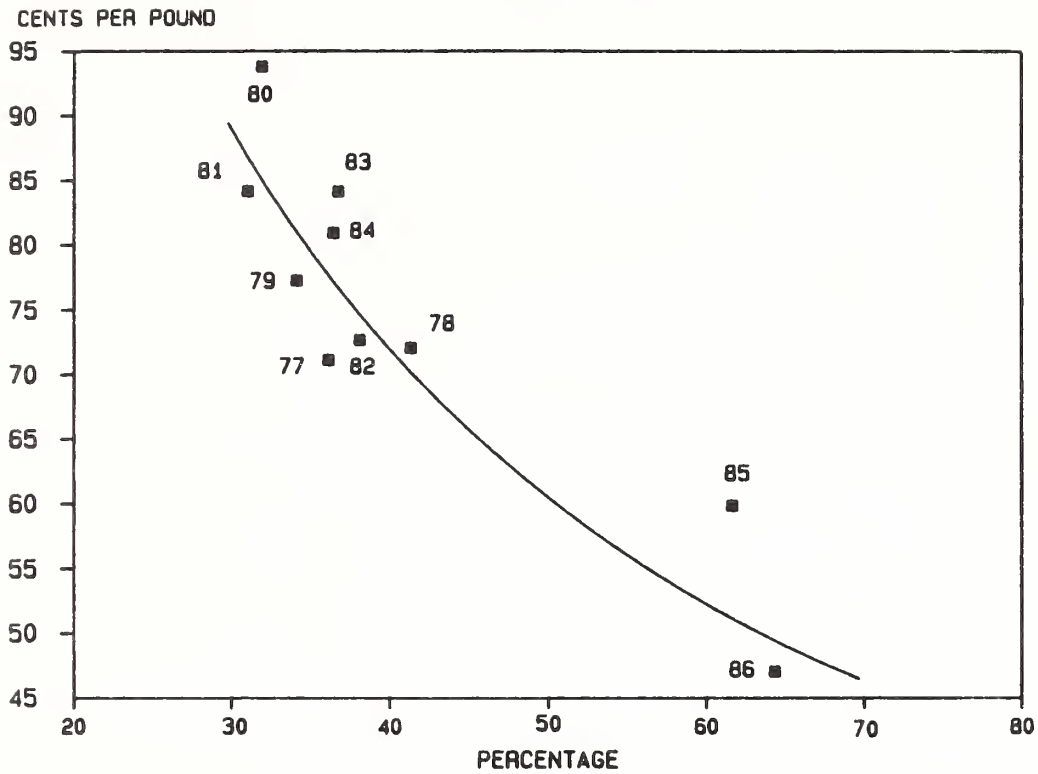
CENTS PER POUND

WORLD COTTON PRICES \*



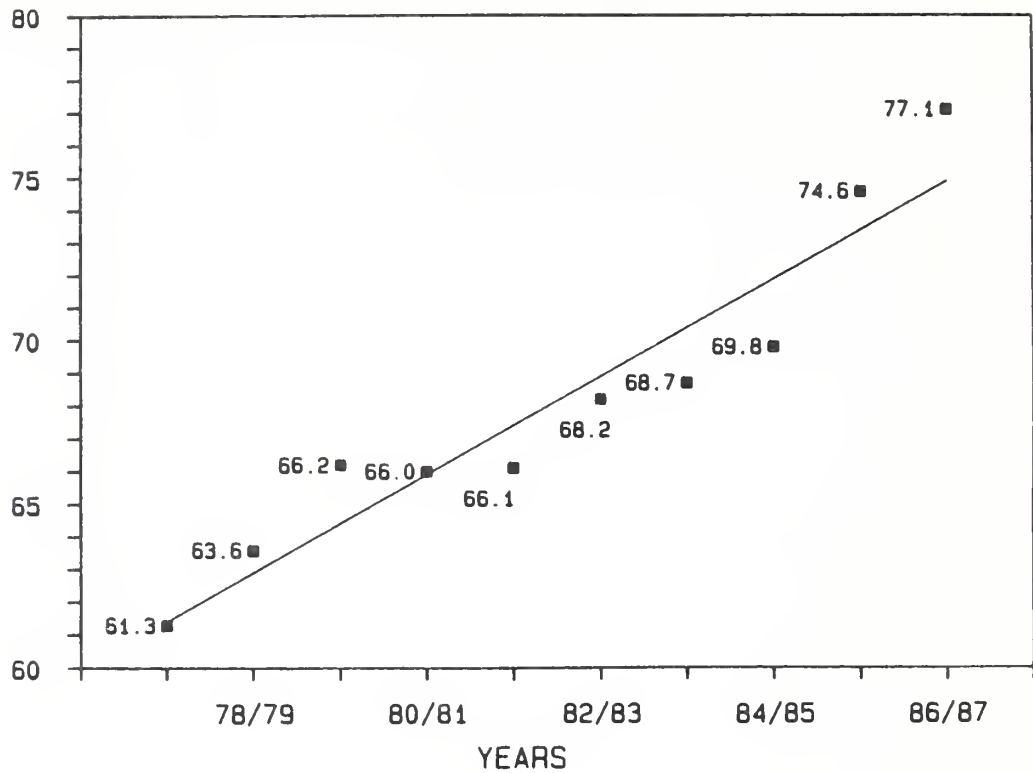
\* NORTHERN EUROPE OUTLOOK "A" INDEX. FOURTH QUARTER 1986 BASED ON 7 WEEKS' DATA.

# WORLD COTTON PRICES AND STOCKS TO USE RATIO

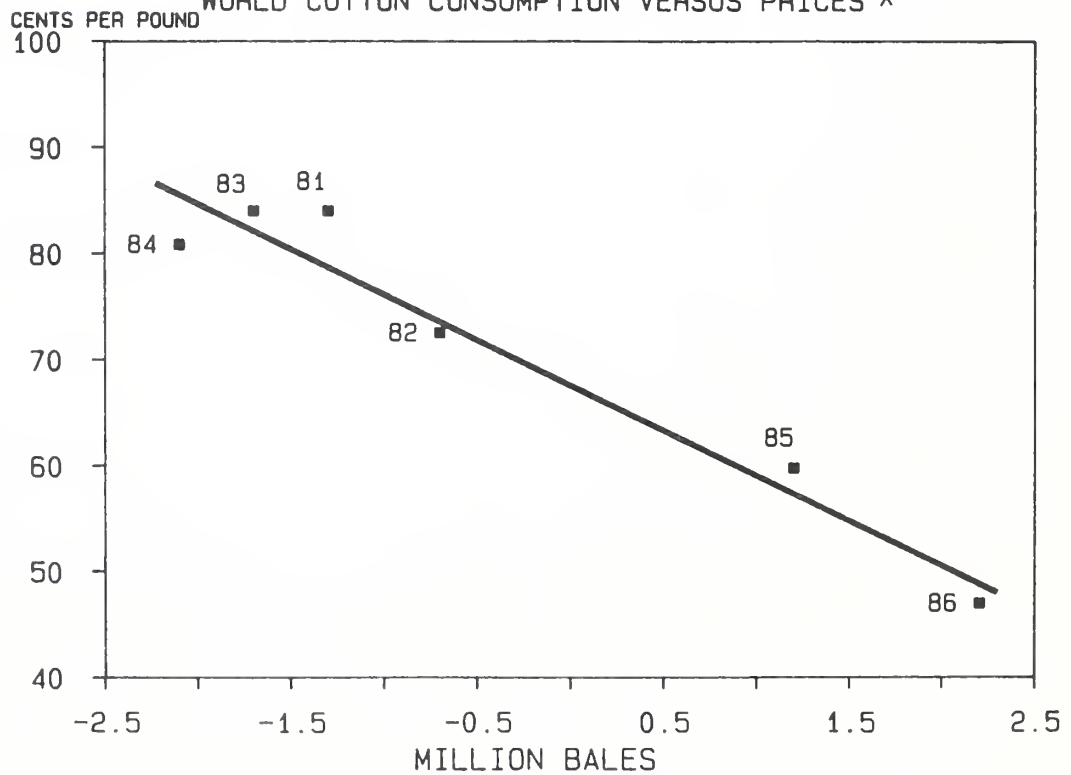


\* NORTHERN EUROPE OUTLOOK "A" INDEX FOR PREVIOUS YEAR

MIL. 480 LB BALES WORLD COTTON CONSUMPTION

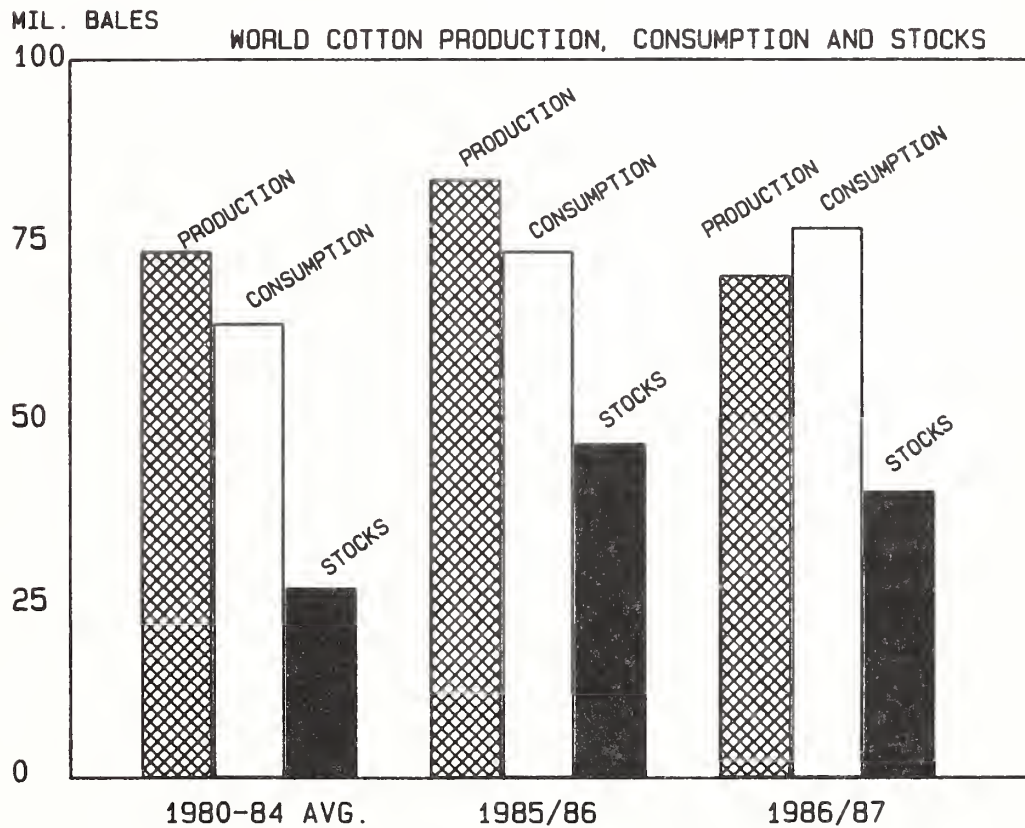
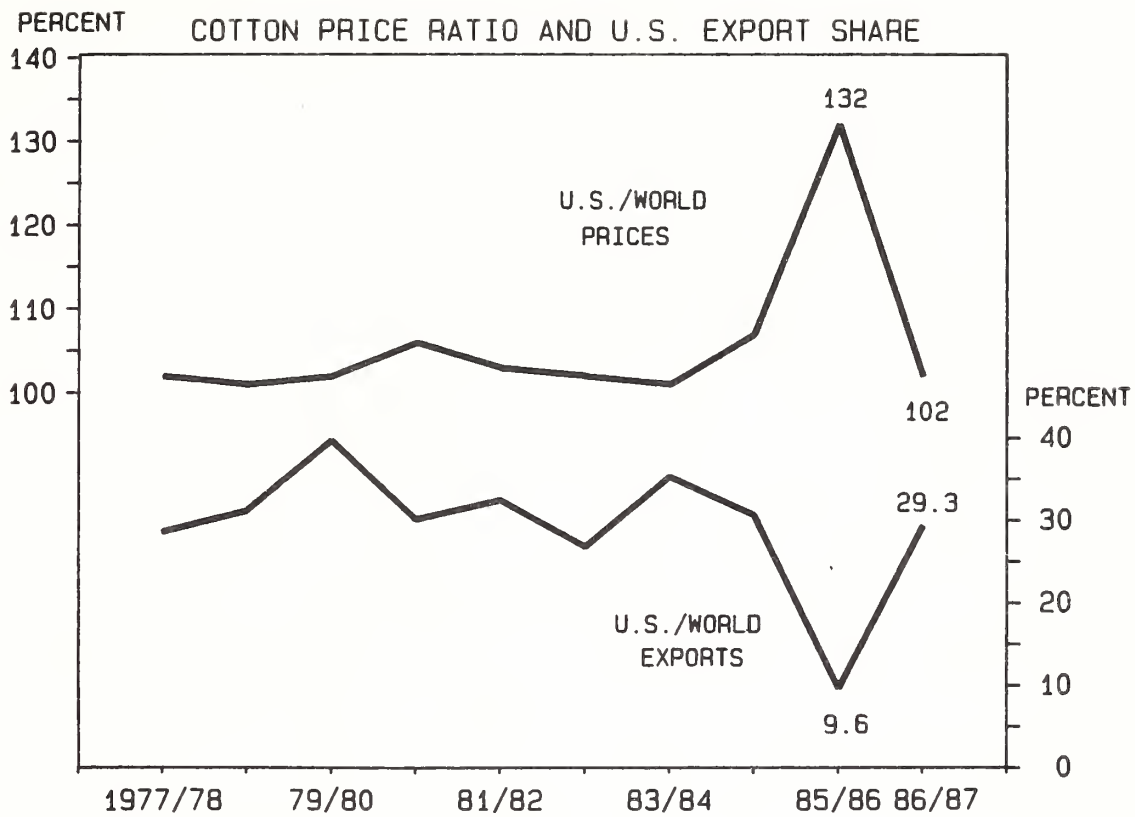


WORLD COTTON CONSUMPTION VERSUS PRICES \*

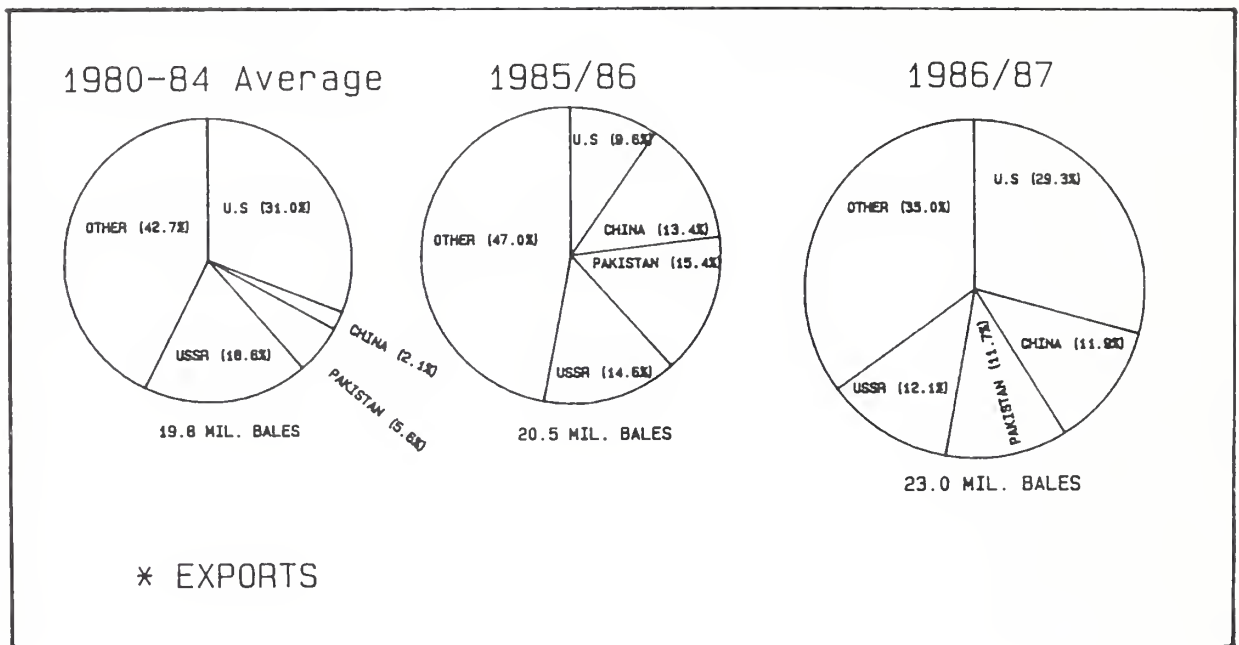


\* CALENDAR YEAR. CONSUMPTION IS DEVIATIONS FROM TREND.



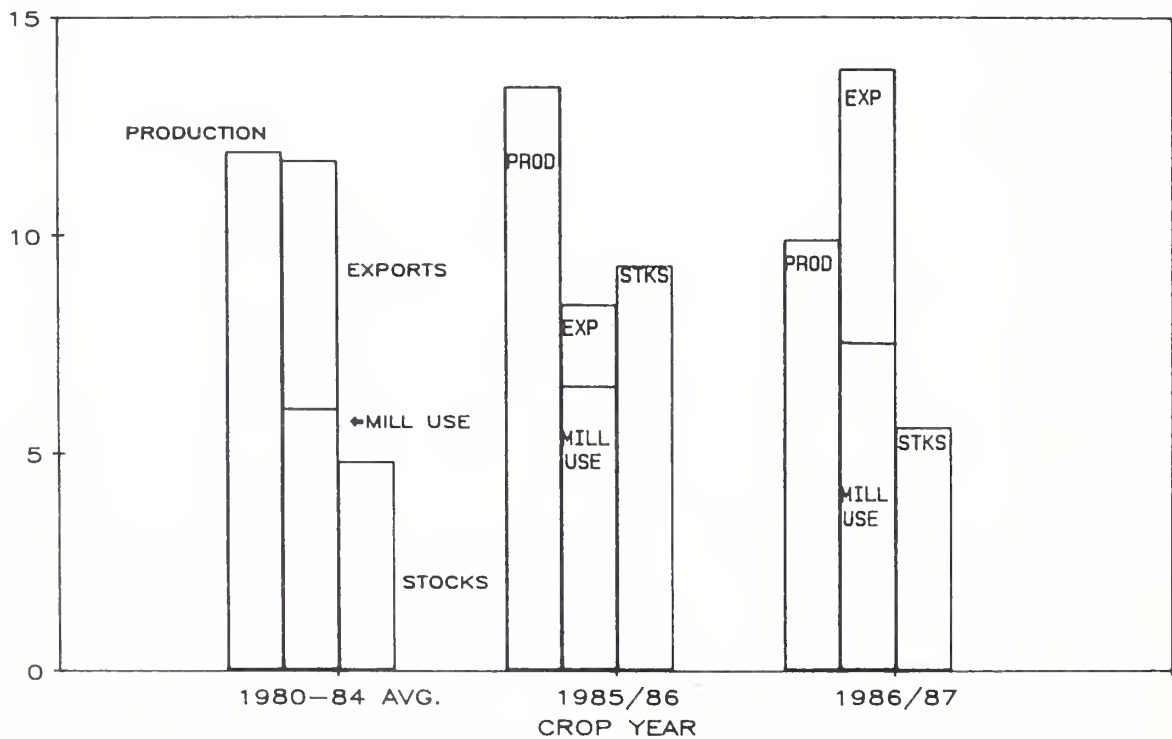


# WORLD COTTON TRADE \*

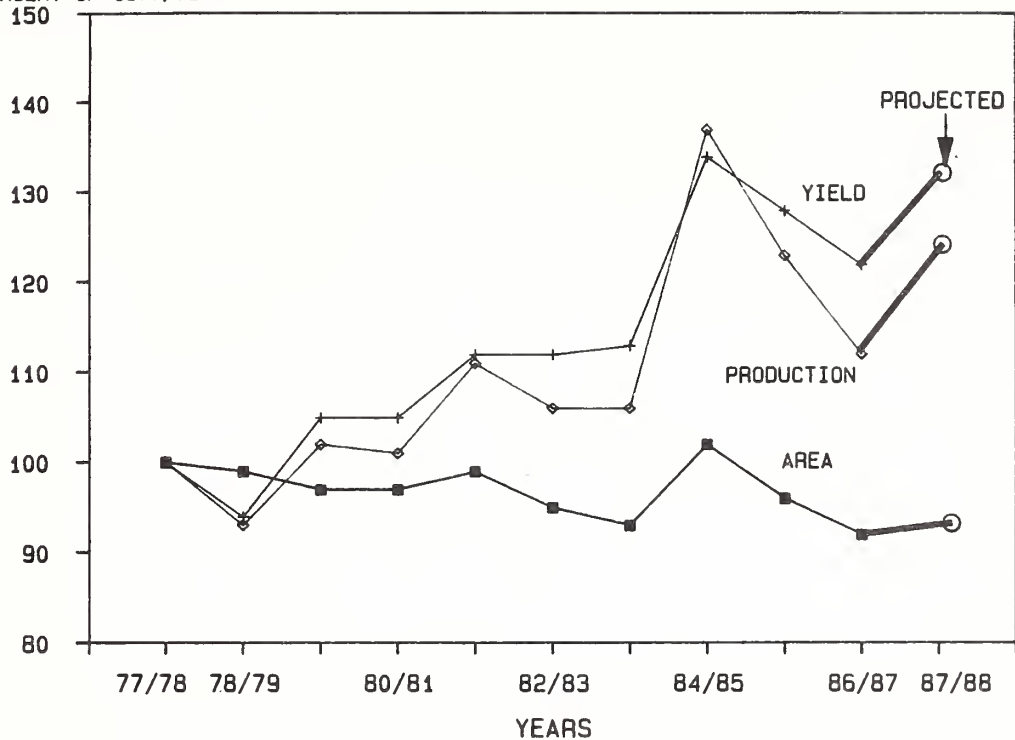


## U.S. COTTON PRODUCTION, DISAPPEARANCE AND STOCKS

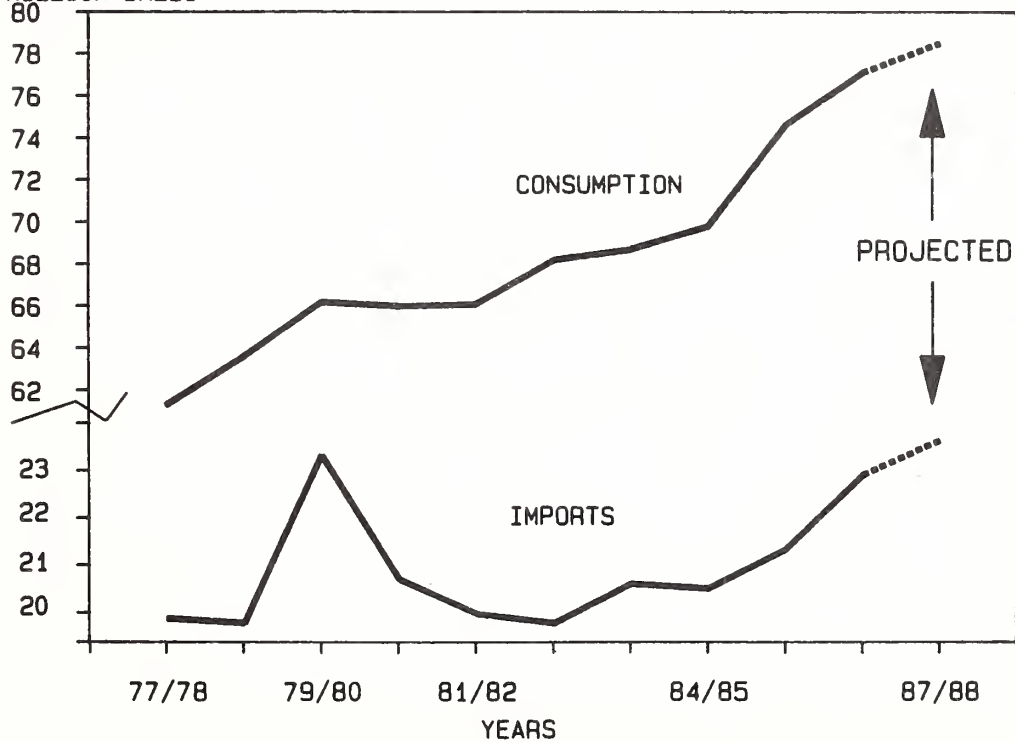
MIL. BALES

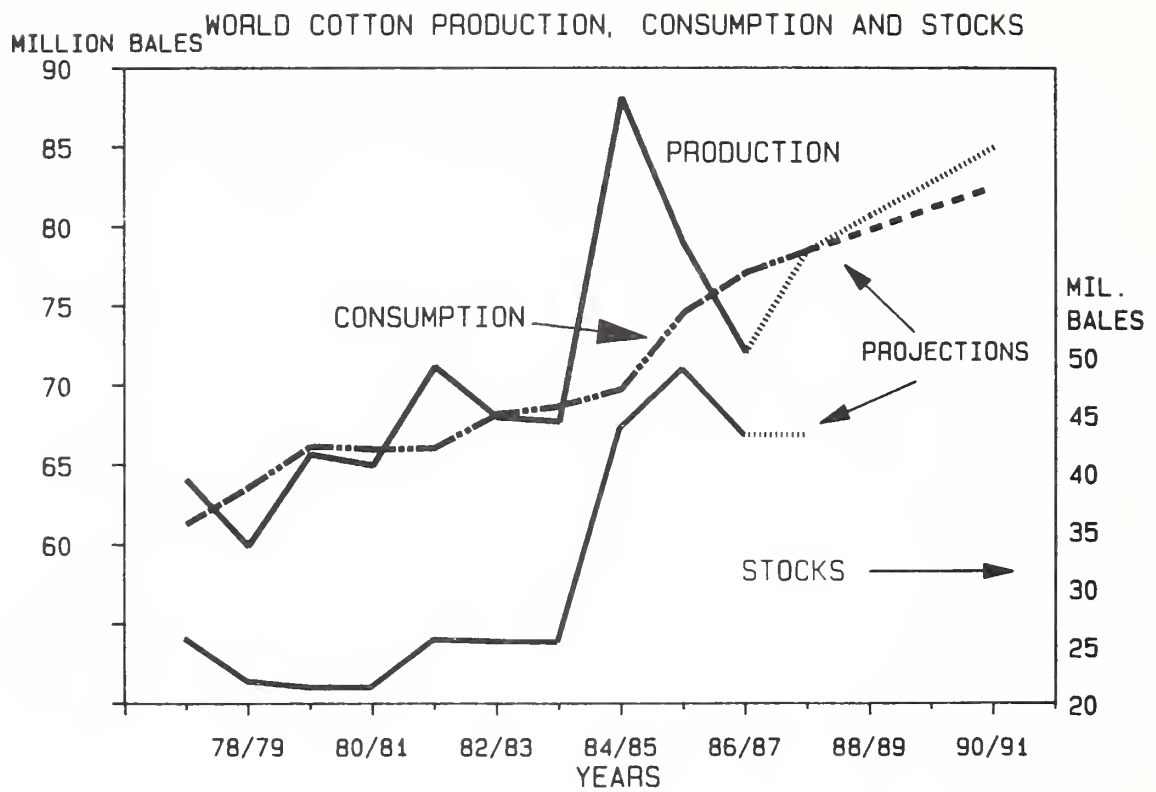


WORLD COTTON AREA, YIELD AND PRODUCTION  
PERCENT OF 1977/78



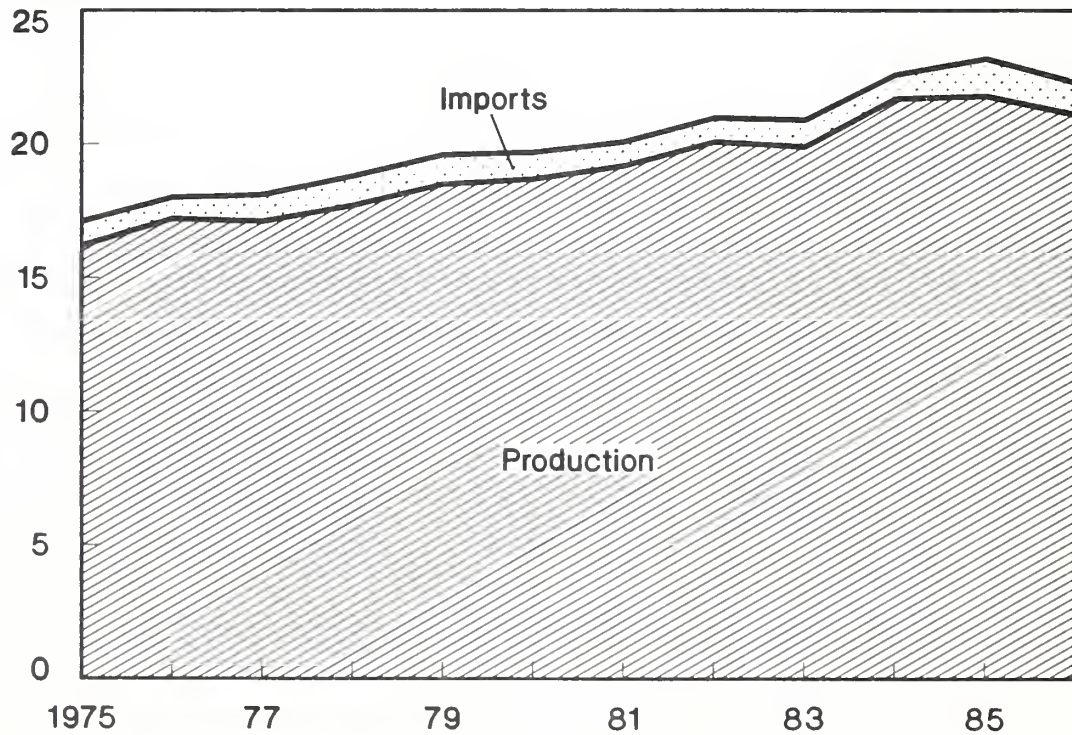
WORLD COTTON CONSUMPTION AND IMPORTS  
MILLION BALES





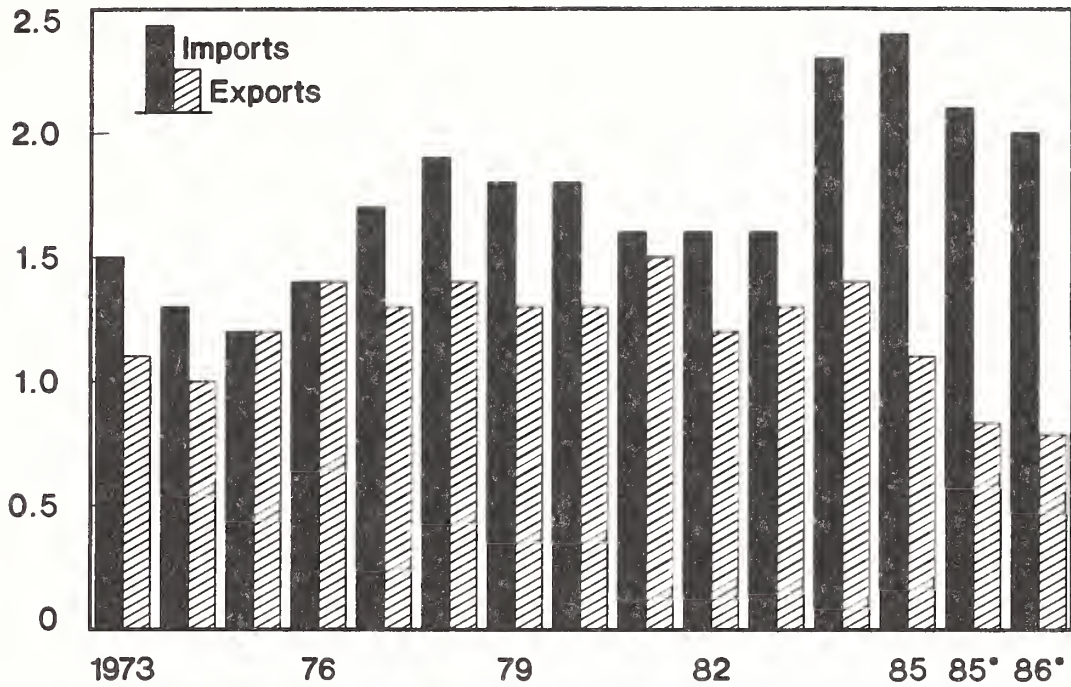
## Fresh Vegetable Supplies

Billion pounds



# Fresh Vegetable Trade

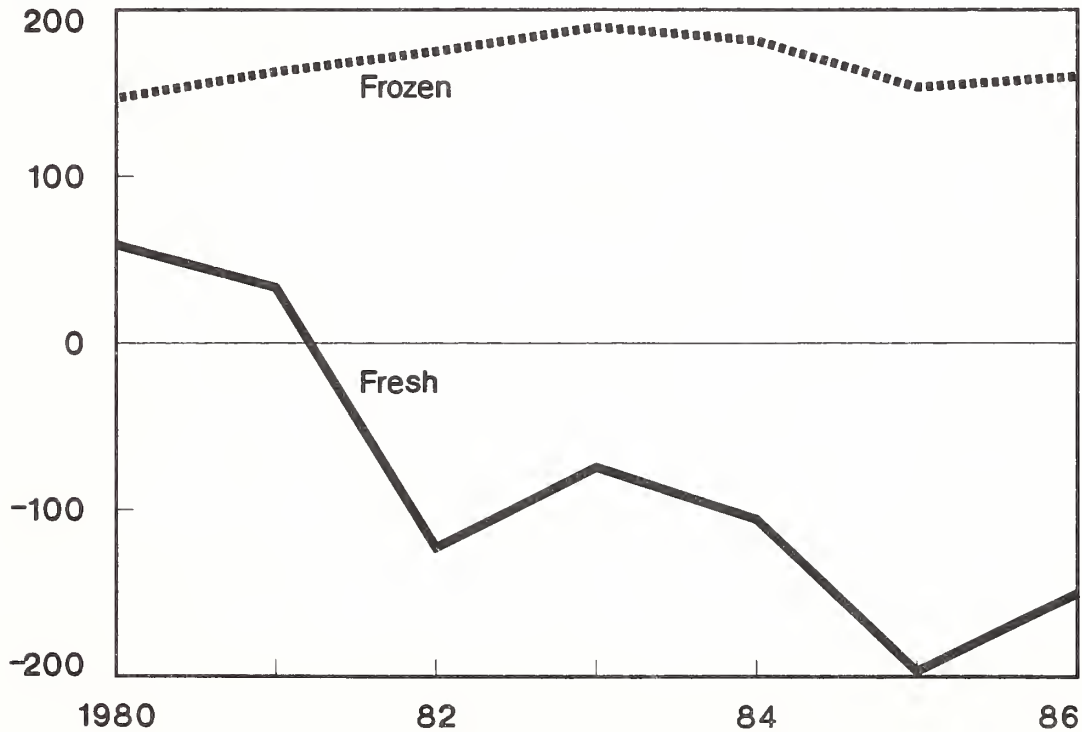
Million pounds



\* Year to September.

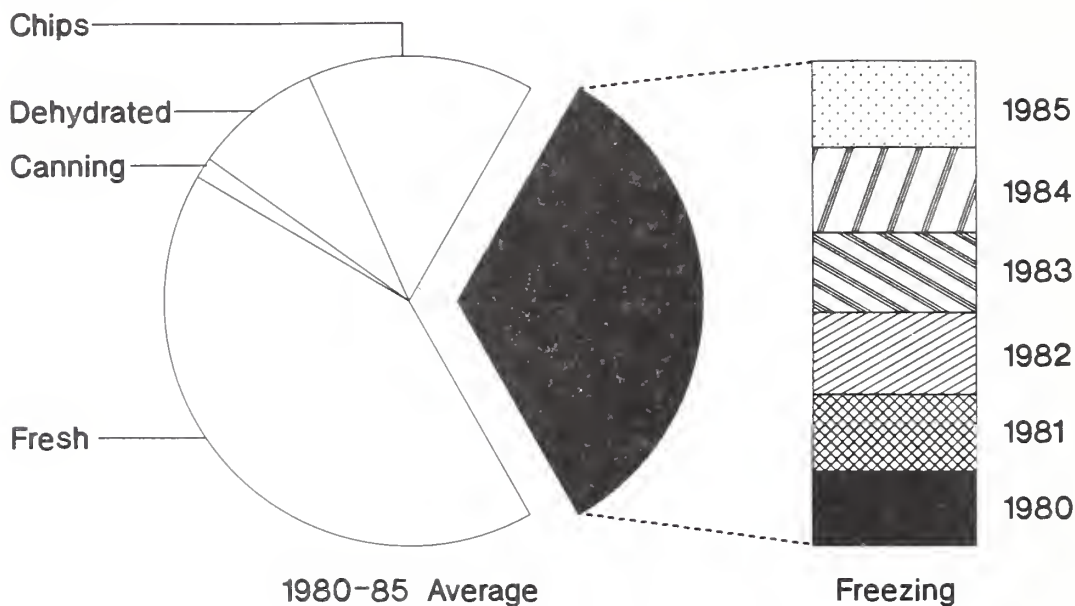
# Net Potato Trade

Million pounds

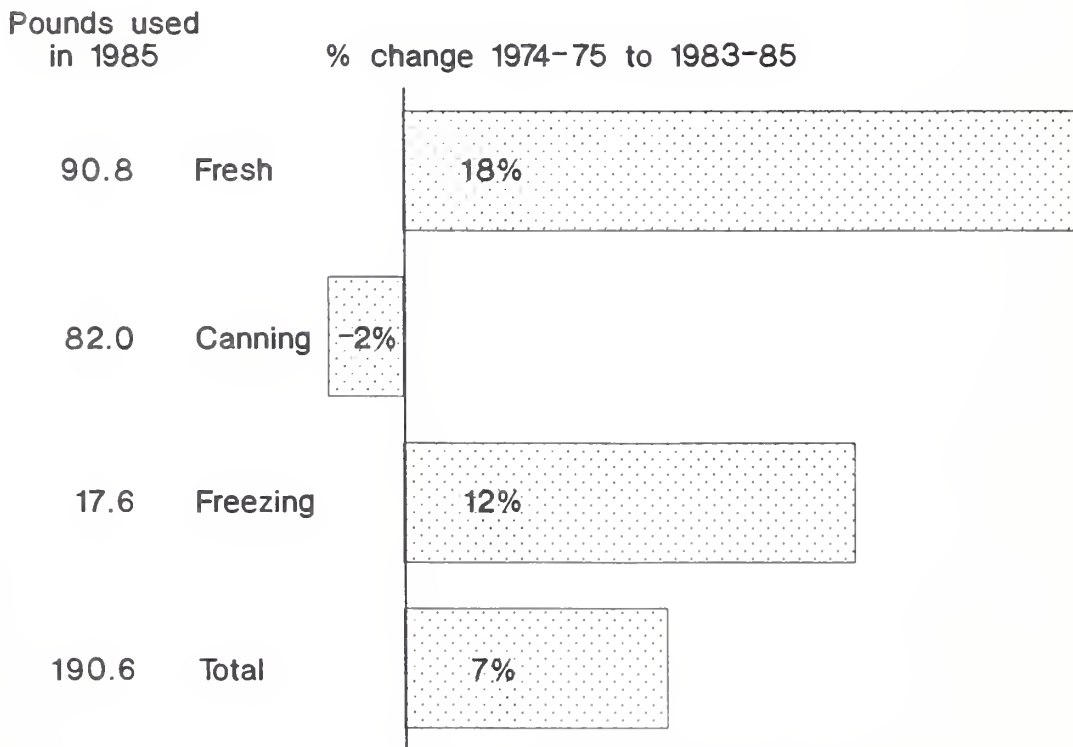




## Per Capita Potato Use: Table Stock and Processing



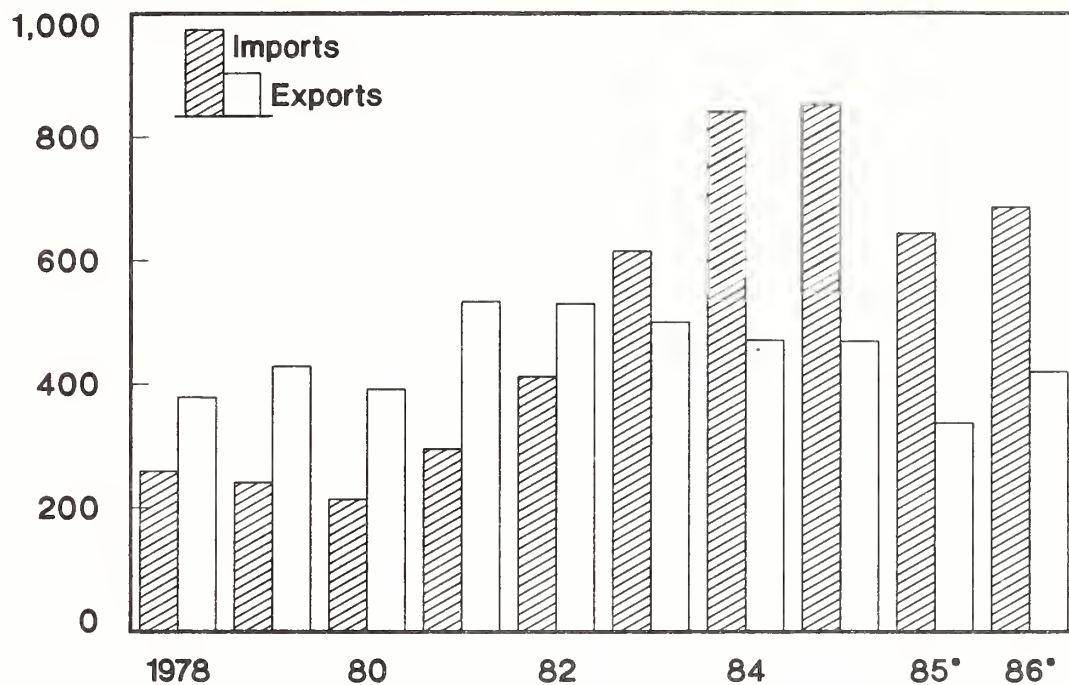
## Per Capita Vegetable Use





## Processed Vegetable Trade

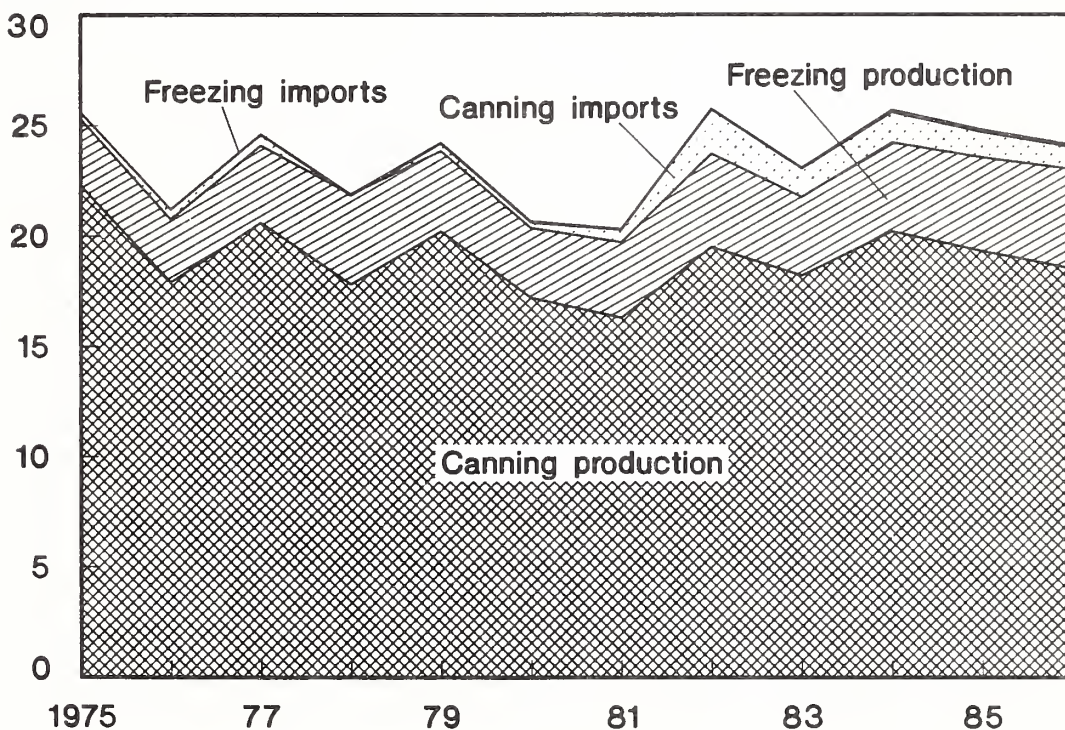
Thousand pounds



\* Year to September.

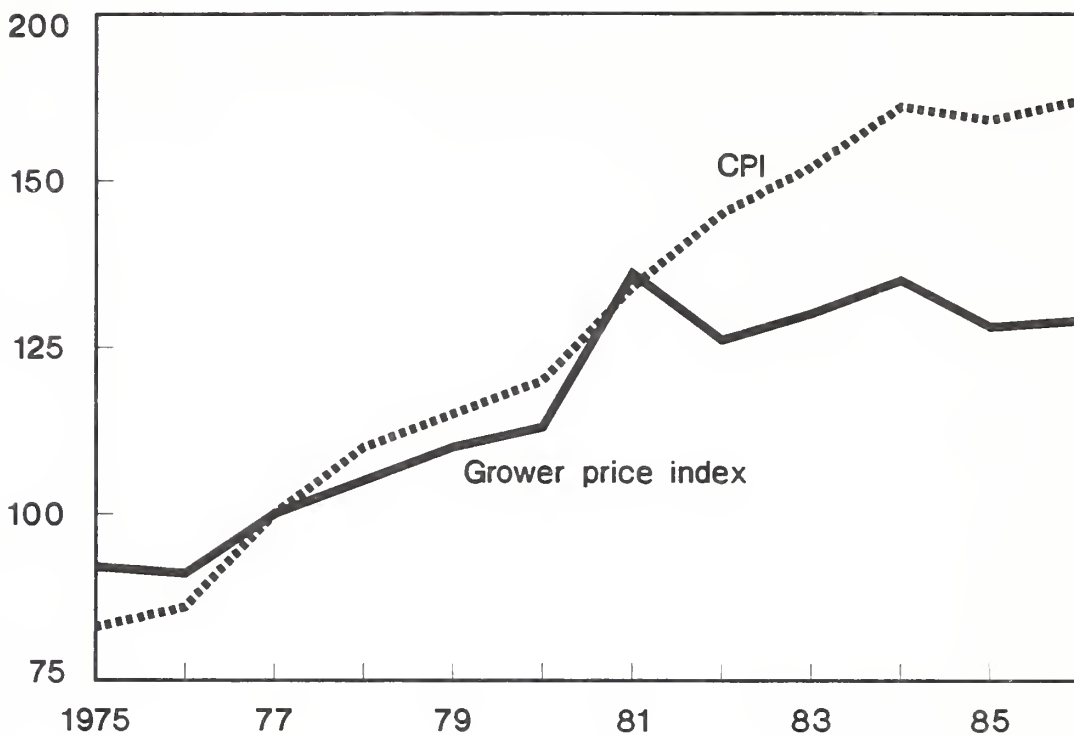
## Processing Vegetable Supplies

Billion tons



# Vegetable Price Indexes

% of 1977

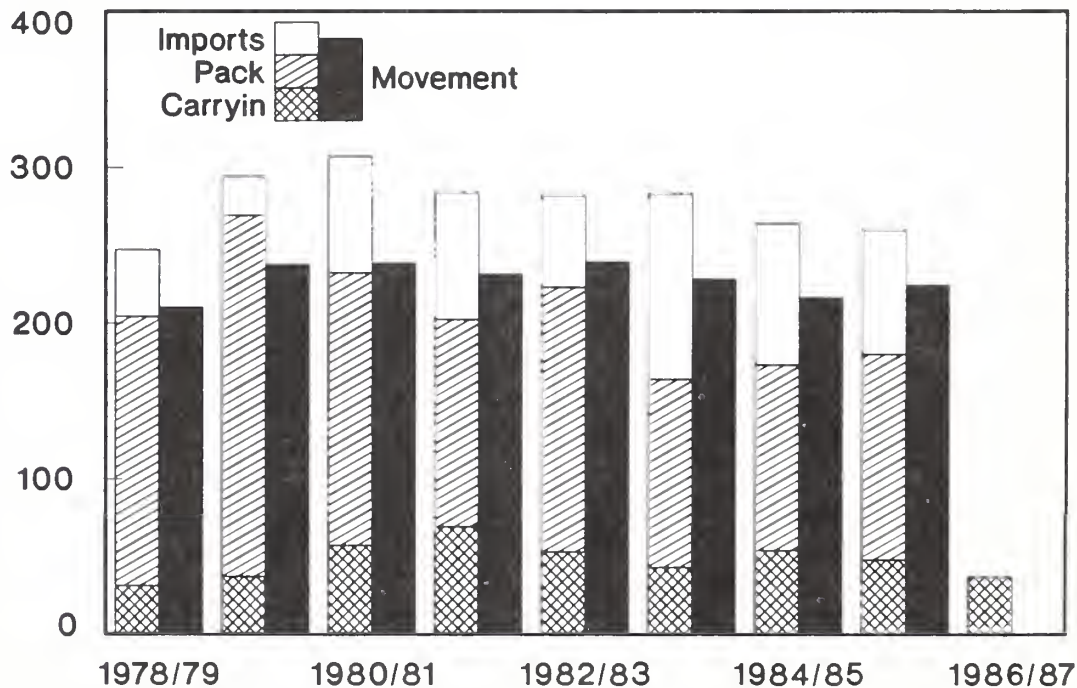


1987 Outlook for Fruit

Ben W. Huang

## Florida Supply and Movement of FCOJ

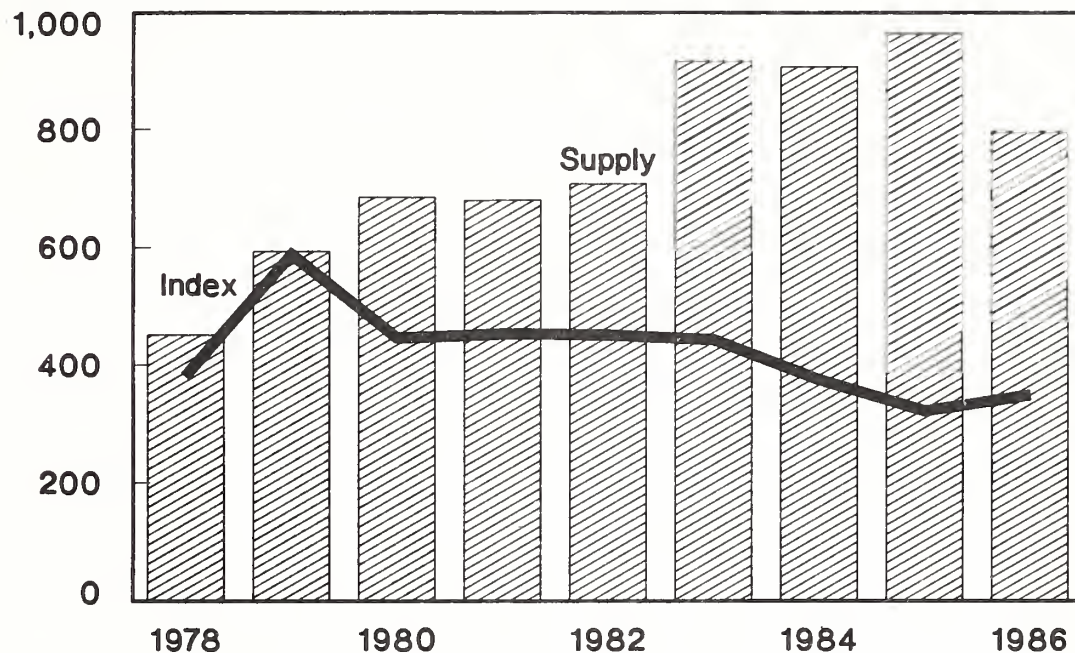
Million gallons



1985/86 imports and movement estimated. 1986/87 estimated.

## Raisins: Domestic Supply and Producer Price Index

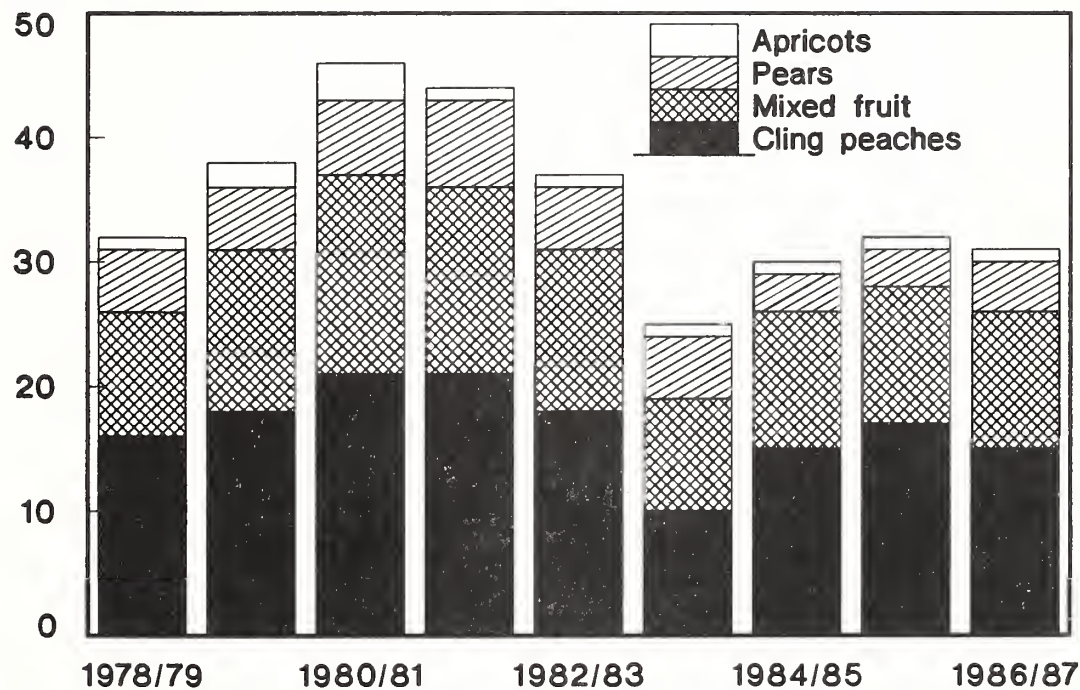
Million pounds



Index--% of 1967. 1986 supply estimated. 1986 index is 9-month average.

## Stocks of Selected Canned Fruit, October 1

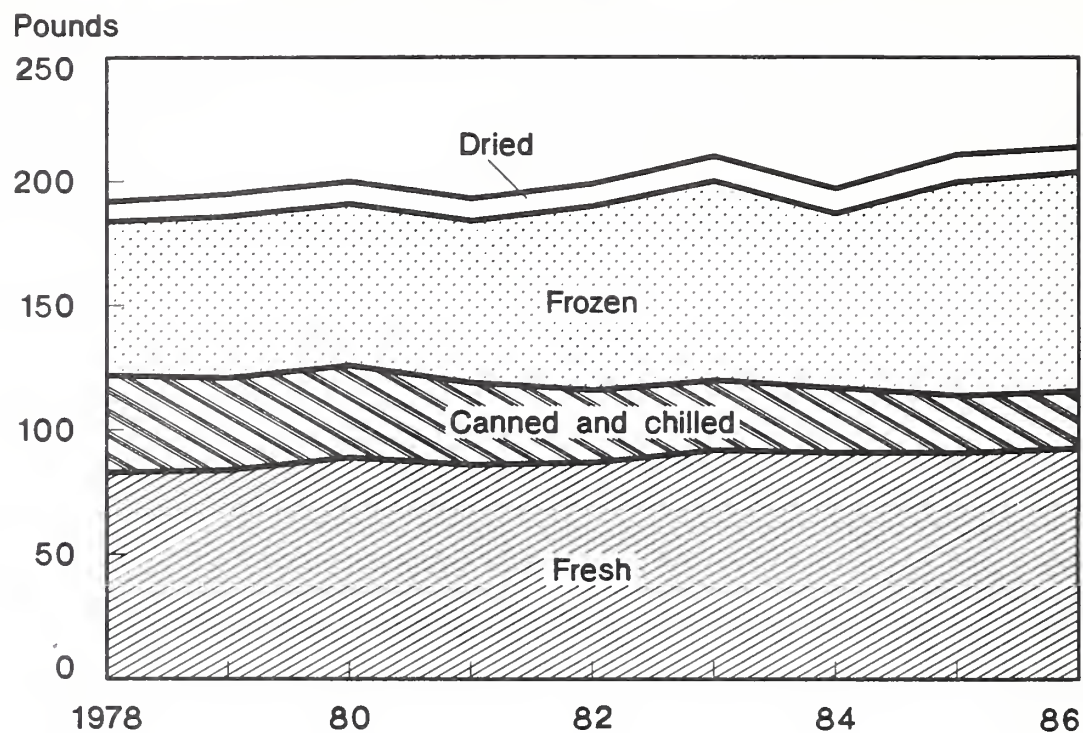
Million cases<sup>1</sup>



1/ 24 2-1/2's.

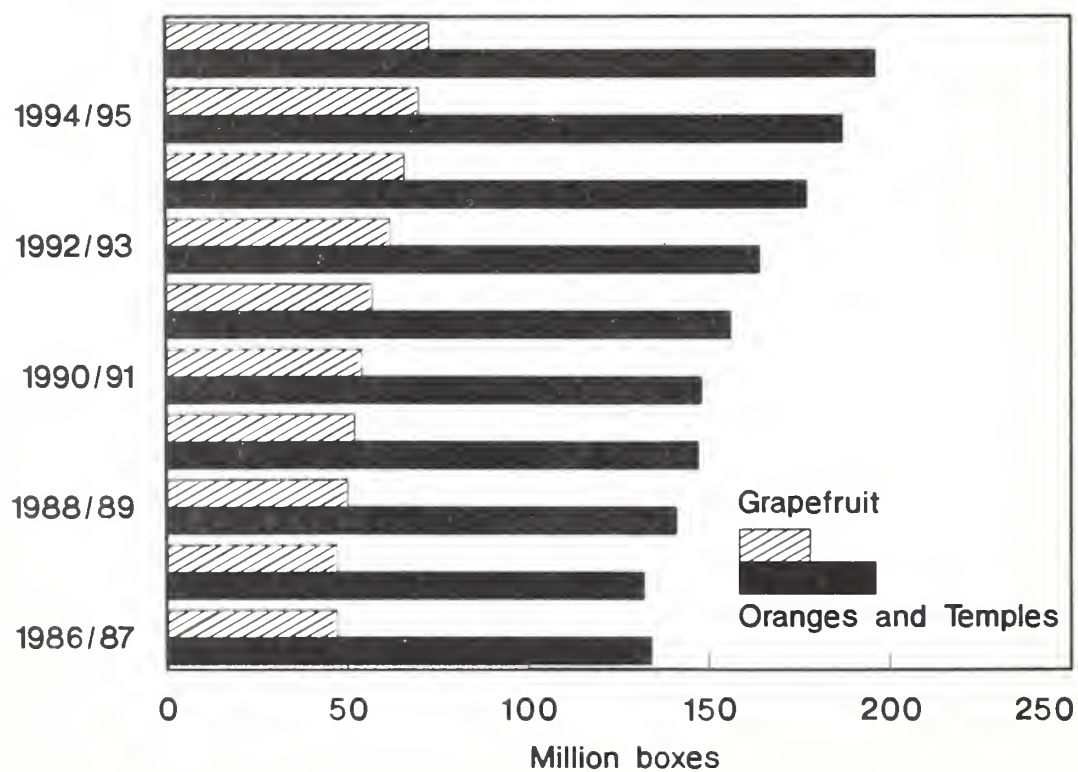


## Per Capita Fruit Consumption



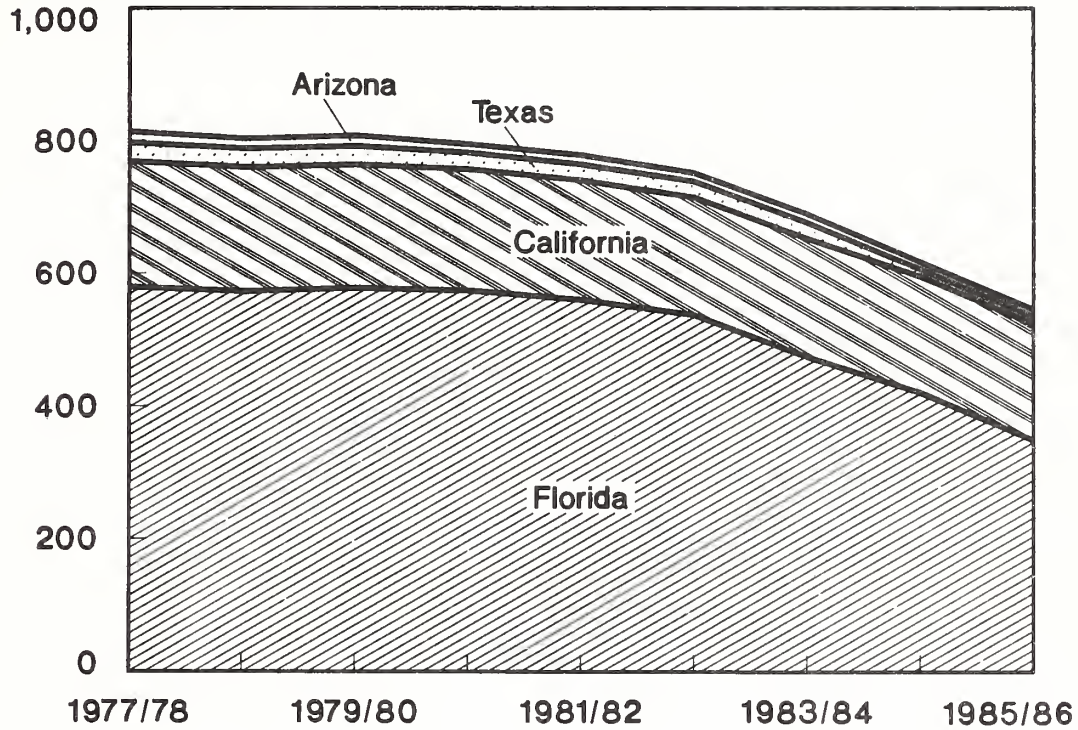
Fresh - weight equivalent. 1986 estimated. Canned and frozen includes fruit and juice.

## Projected Florida Citrus Production



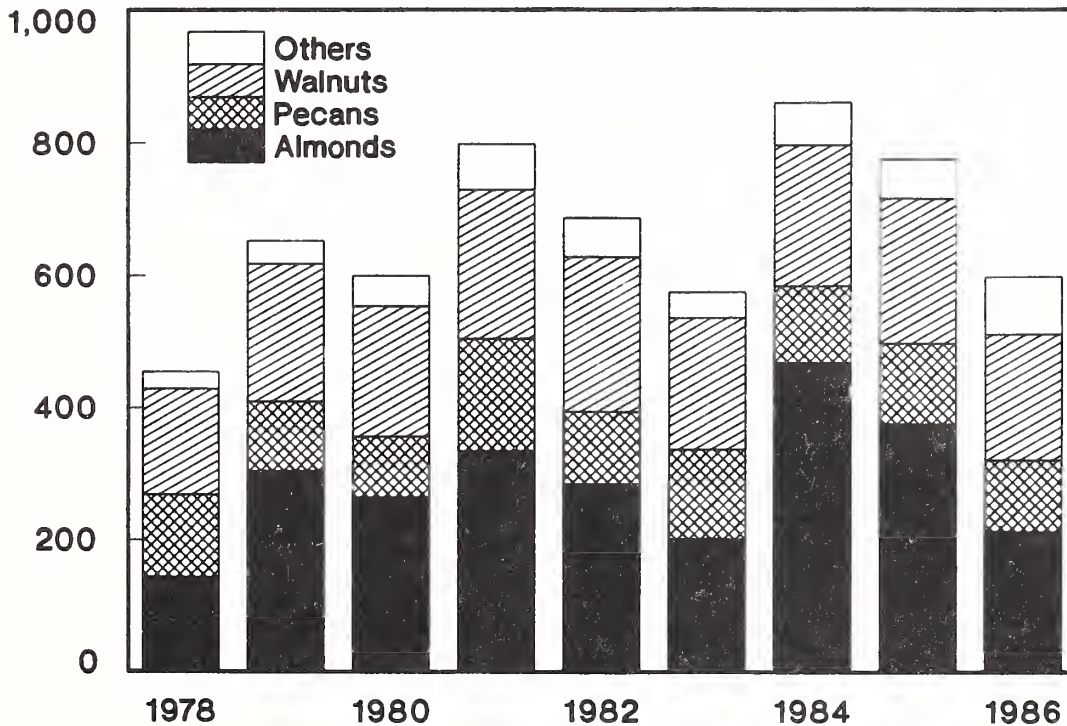
## U.S. Orange Bearing Acreage

Thousand acres



## U.S. Tree Nut Production

Thousand tons



## Consumer Price Index for Fresh Fruit

Quarters	1983	1984	1985	1986	1987 <sup>1</sup>
	% of 1967				
1st	274	295	356	352	353
2nd	301	321	377	375	378
3rd	324	355	370	386	385
4th	285	343	355	358 <sup>1</sup>	364
Annual	296	329	365	368	370

1/ Estimated.

## Consumer Price Index for Processed Fruit

Quarters	1983	1984	1985	1986	1987 <sup>1</sup>
	% of Dec. 1977				
1st	151	156	167	166	163
2nd	150	162	169	163	164
3rd	151	164	168	162	163
4th	151	164	168	163 <sup>1</sup>	162
Annual	151	162	168	164	163

1/ Estimated.

## Grower Prices for Fresh and Processing Fruit

Quarters	1983	1984	1985 % of 1977	1986	1987 <sup>1</sup>
1st	126	142	184	155	147
2nd	127	170	188	160	151
3rd	110	255	178	172	159
4th	151	239	183	161 <sup>1</sup>	148
Annual	128	202	183	162	151

1/ Estimated.

## U.S. Citrus Production

	1979	1985 1,000 tons	1986	Change from 1979 1985 Percent	
Oranges	11,832	7,512	8,511	-28	13
Navels	6,658	4,170	4,787	-28	15
Valencias	5,174	3,342	3,724	-28	11
Grapefruit	2,986	2,188	2,399	-20	10
Lemons	789	697	939	19	35
Tangelos	288	133	180	-37	35
Tangerines	275	149	174	-37	17
Temple	270	133	162	-40	22
Total	16,440	10,812	12,365	-25	14



## U.S. Production of Selected Noncitrus Fruit

	1984	1985	1986	Change from	
		1,000 tons		1984	1985
				Percent	
Apples	4,166	3,975	3,869	-7	-3
Apricots	127	132	69	-46	-48
Cherries	318	276	255	-20	-8
Grapes	5,194	5,605	4,908	-6	-12
Nectarines	183	211	195	7	-8
Peaches	1,330	1,074	1,139	-14	6
Pears	710	747	711	--	-5
Prunes/Plums	721	641	462	-36	-28
Total	12,749	12,662	11,608	-9	-8

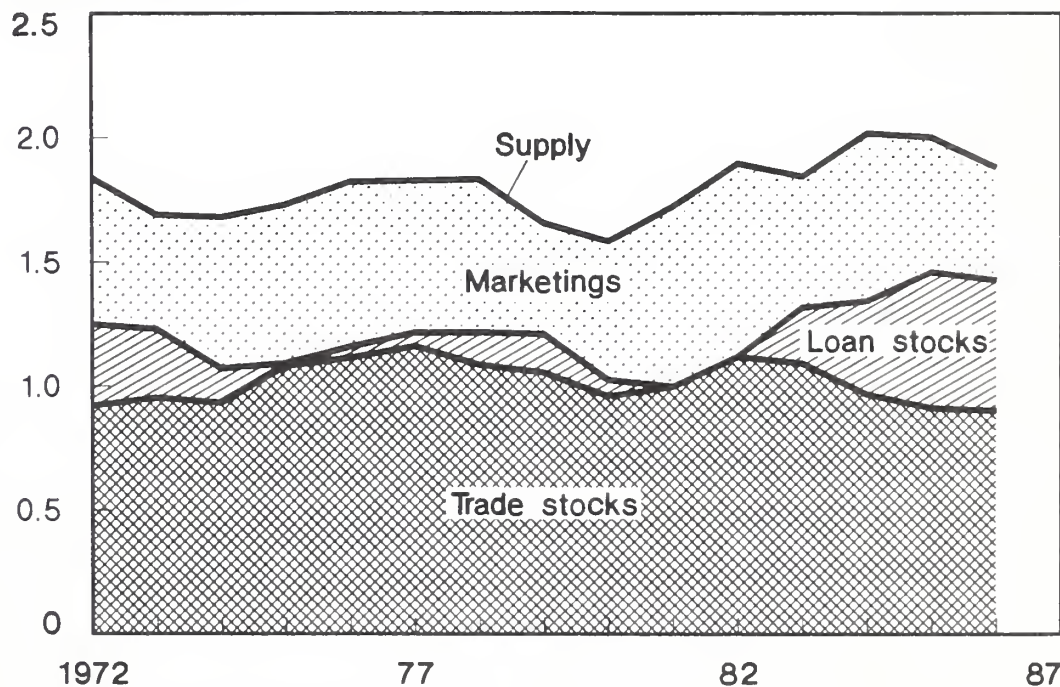


1987 Outlook for Tobacco

Verner N. Grise

### Burley Tobacco Supply

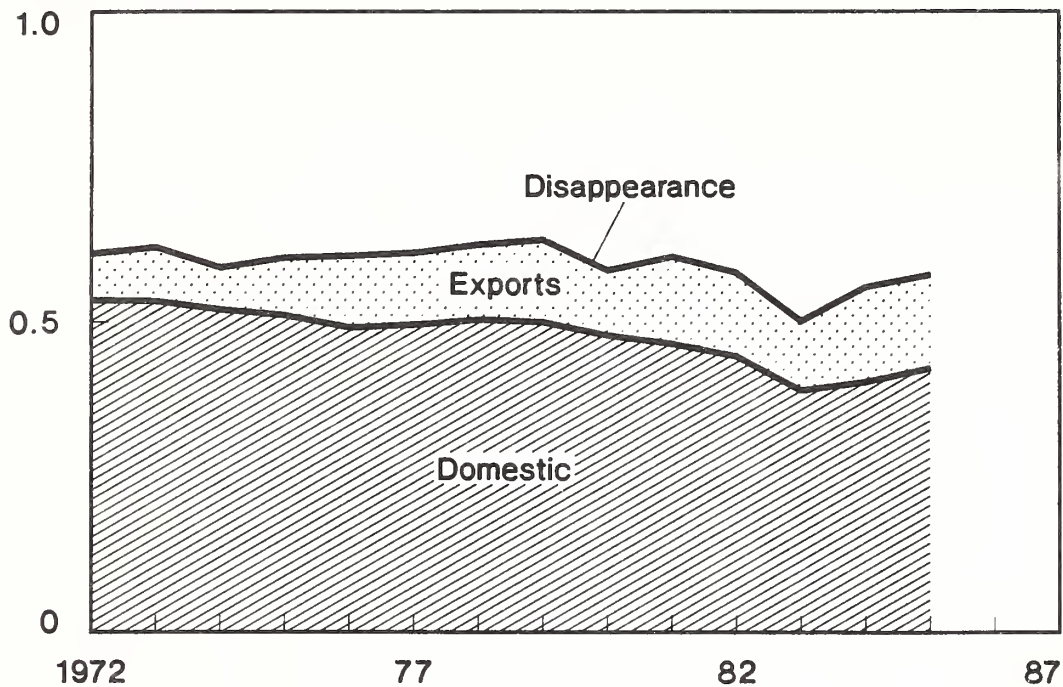
Billion pounds



Trade stocks include manufacturers' and dealers'.

## Burley Use

Billion pounds

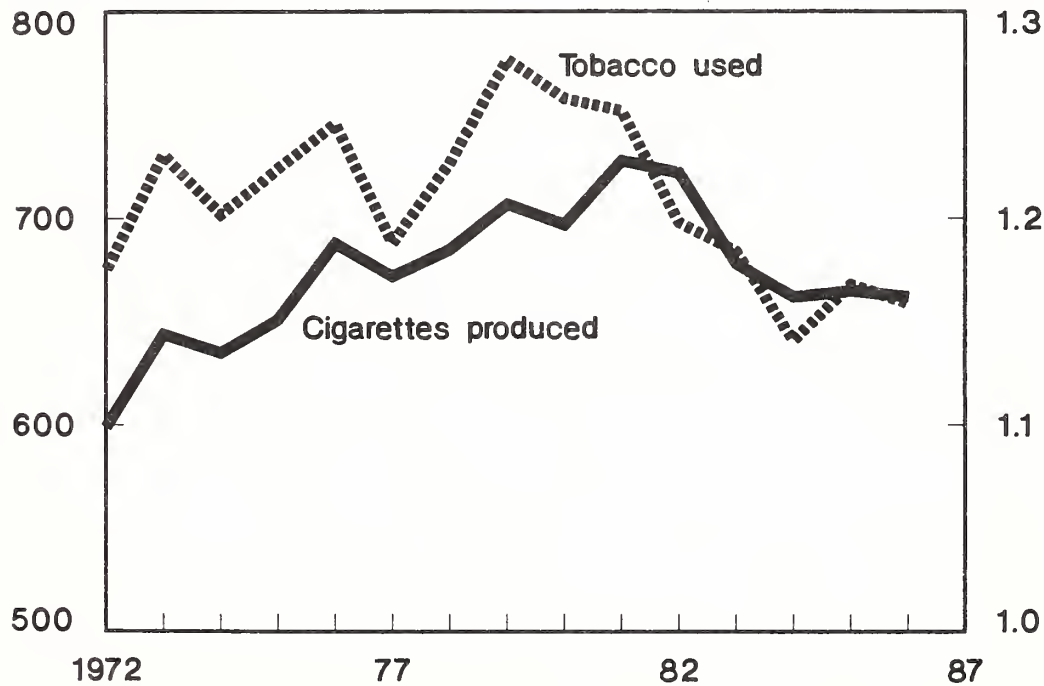


Crop year beginning October 1.

## Cigarettes Produced and Tobacco Used

Billion cigarettes

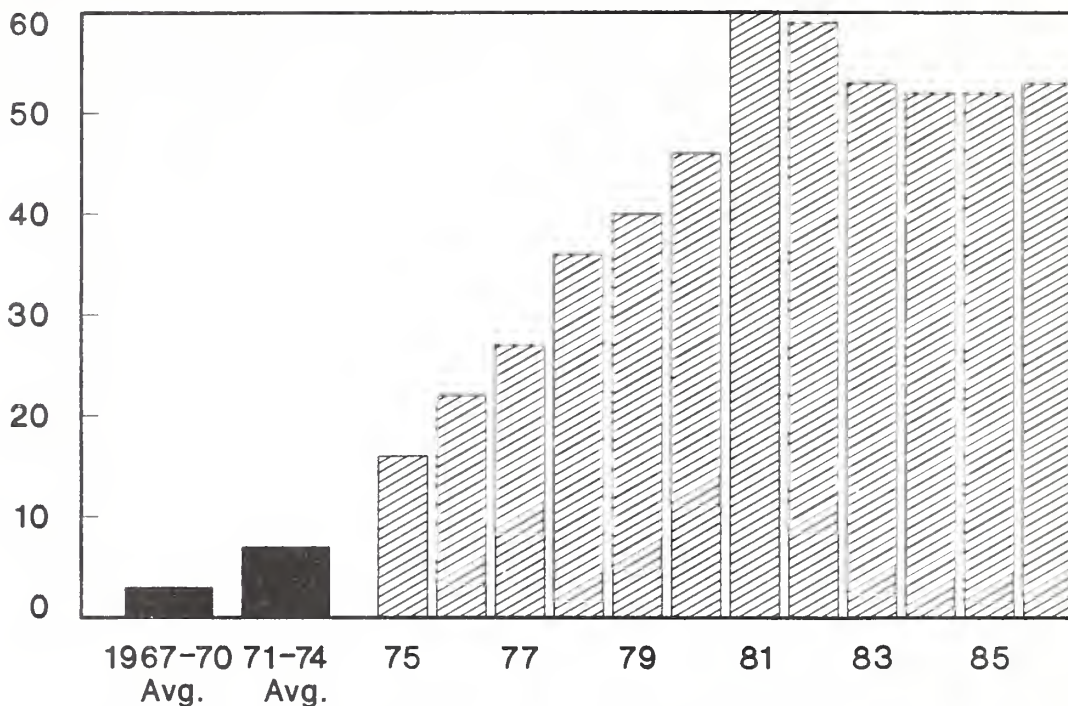
Billion pounds



Billion pounds in unstemmed processing weight. 1986 forecast.

## Cigarettes: Low-Tar Market Share\*

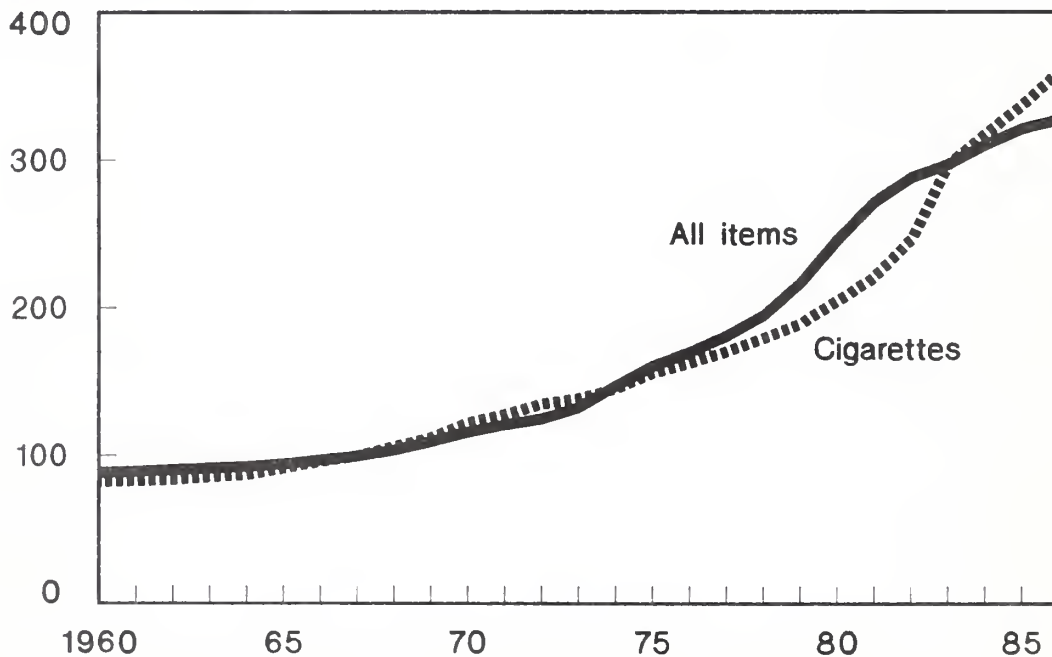
Percent



\* 15 mg. 'tar' or less. Federal Trade Commission data. Latest year estimated.

## Consumer Price Index and Cigarette Prices

Percent of 1967



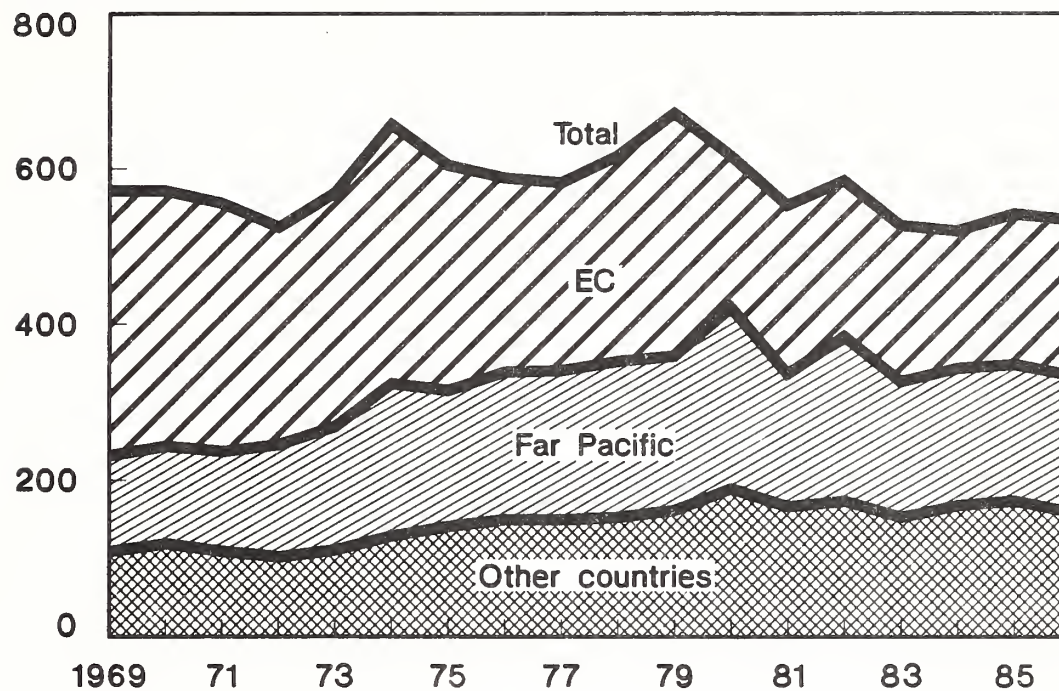
BLS Data. Beginning 1978 for all urban consumers.

Cigarettes, filter tip, king size for 1960-77. Latest year estimated.



## Export Markets for U.S. Tobacco

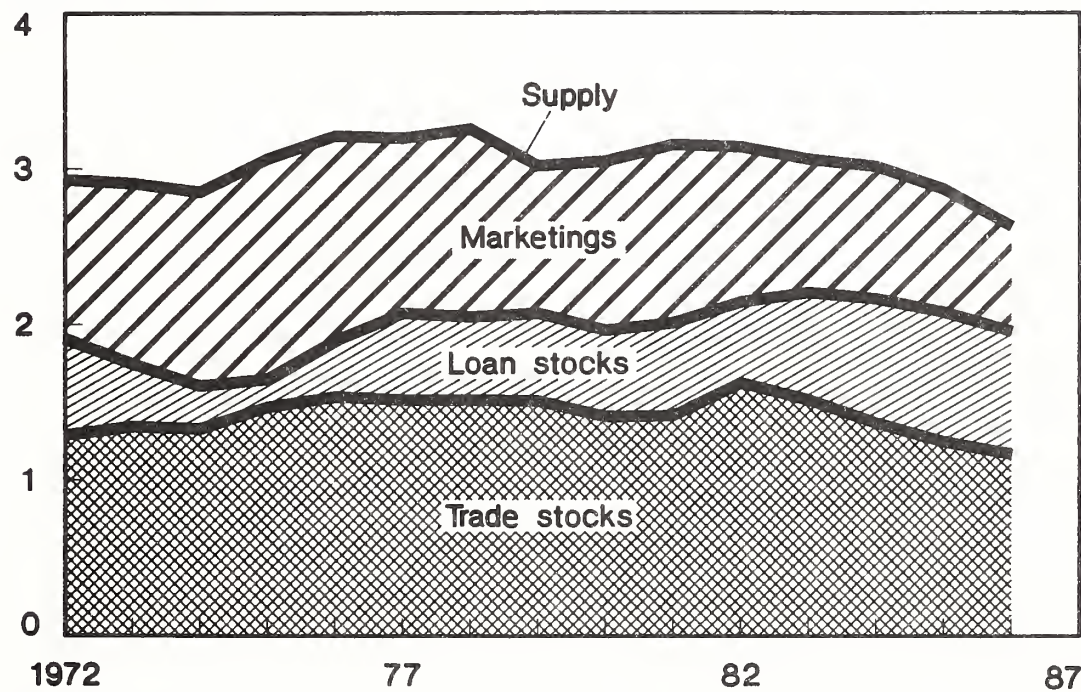
Million pounds



Unmanufactured, declared weight. Year ending June 30.

## Flue-Cured Tobacco Supply

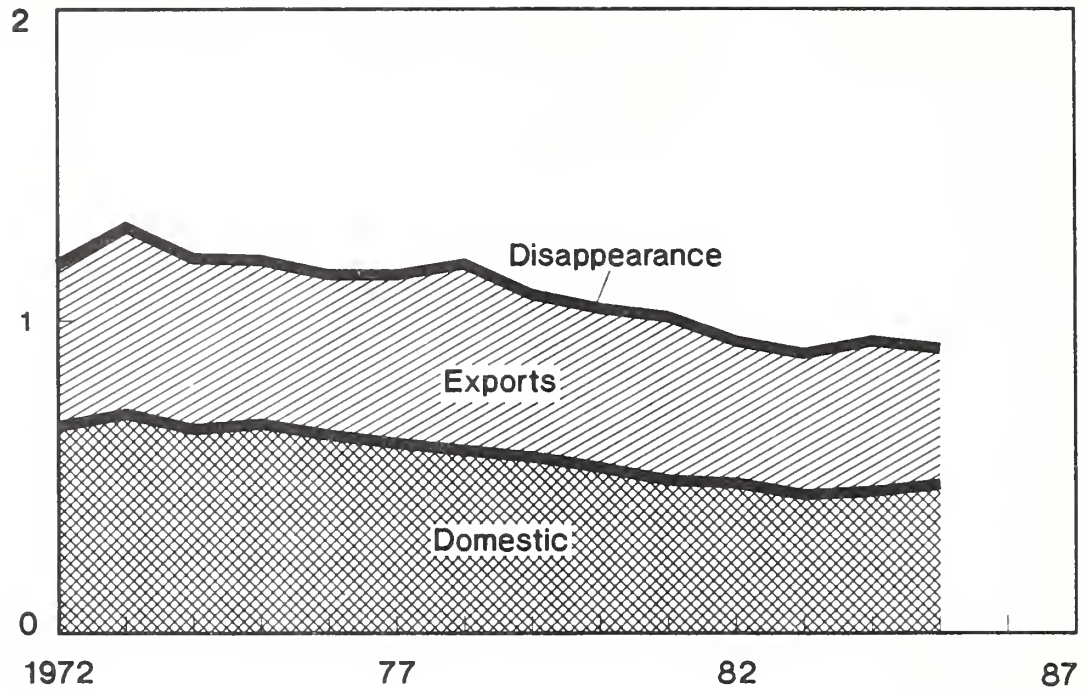
Billion pounds



Trade stocks include manufacturers and dealers.

## Flue-Cured Use

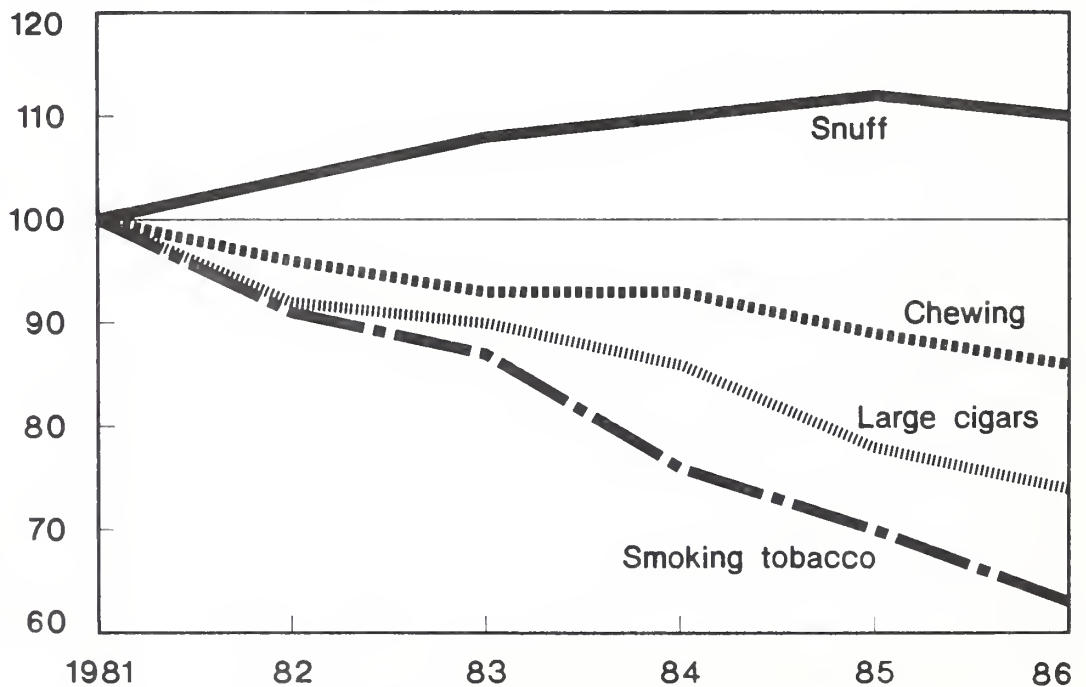
Billion pounds



Crop year beginning July 1.

## Per Capita Consumption of Tobacco Products

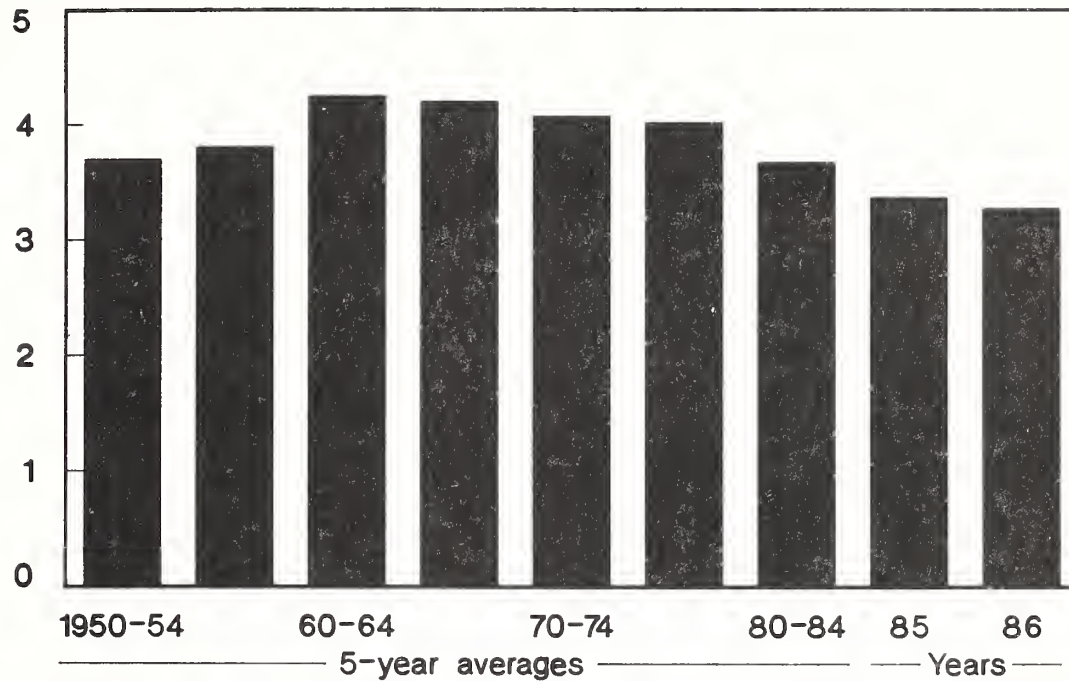
% of 1981



1986 preliminary. Per male 18 and over, except snuff per person 18 and over.

## Per Capita Cigarette Consumption

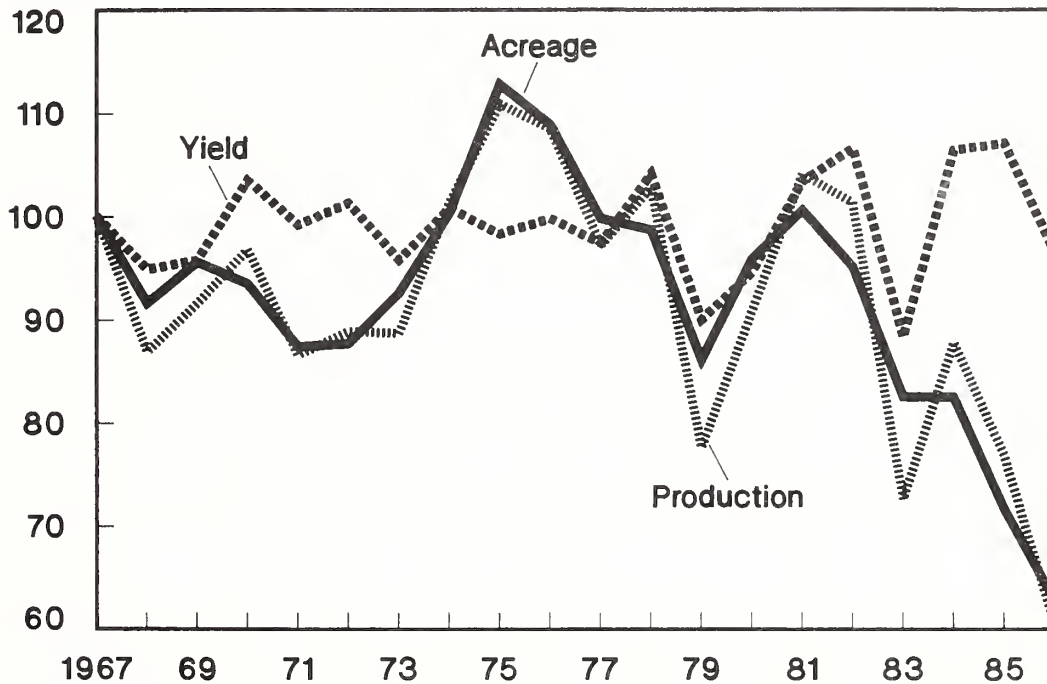
Thousand cigarettes



1986 projected. Persons 18 and over.

## Tobacco Acreage, Yield, and Production

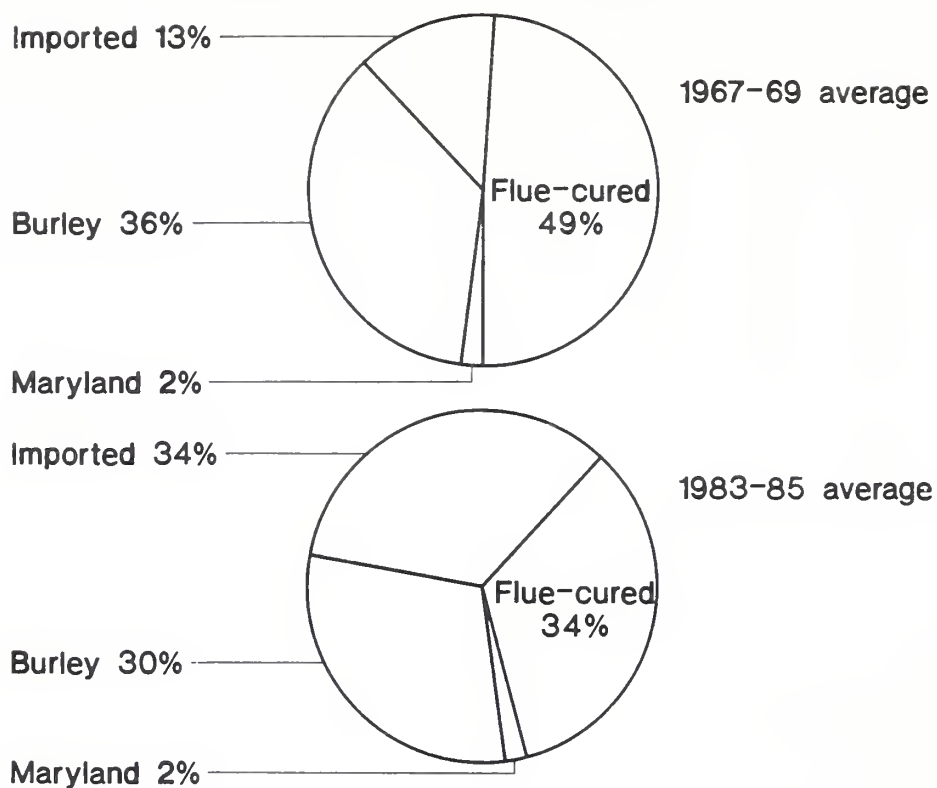
Percent of 1967



Latest year subject to revision.

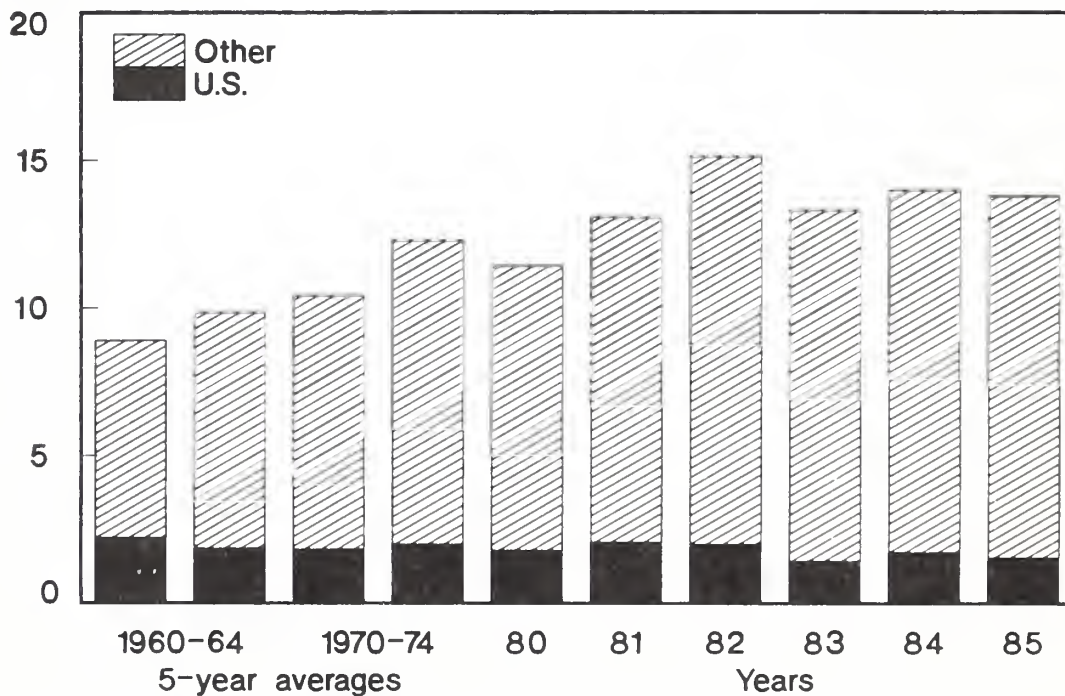


## Tobacco Use in Cigarettes



## U.S. and World Tobacco Production

Billion pounds\*

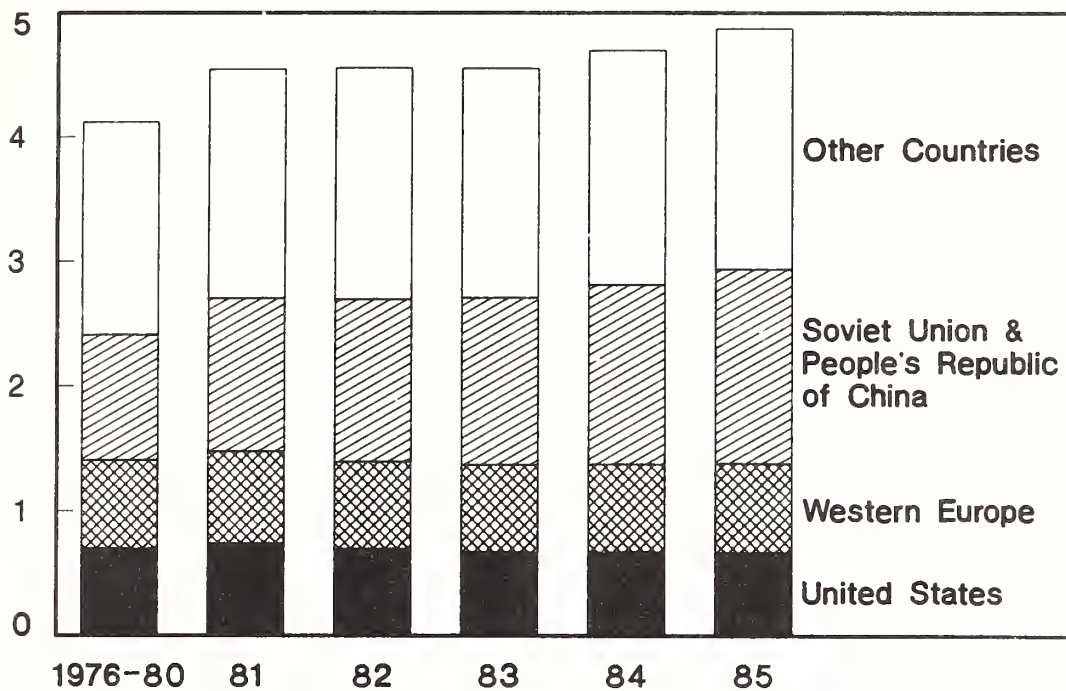


\* Farm-sales weight. Latest year projected.



# World Cigarette Output

Trillion pieces



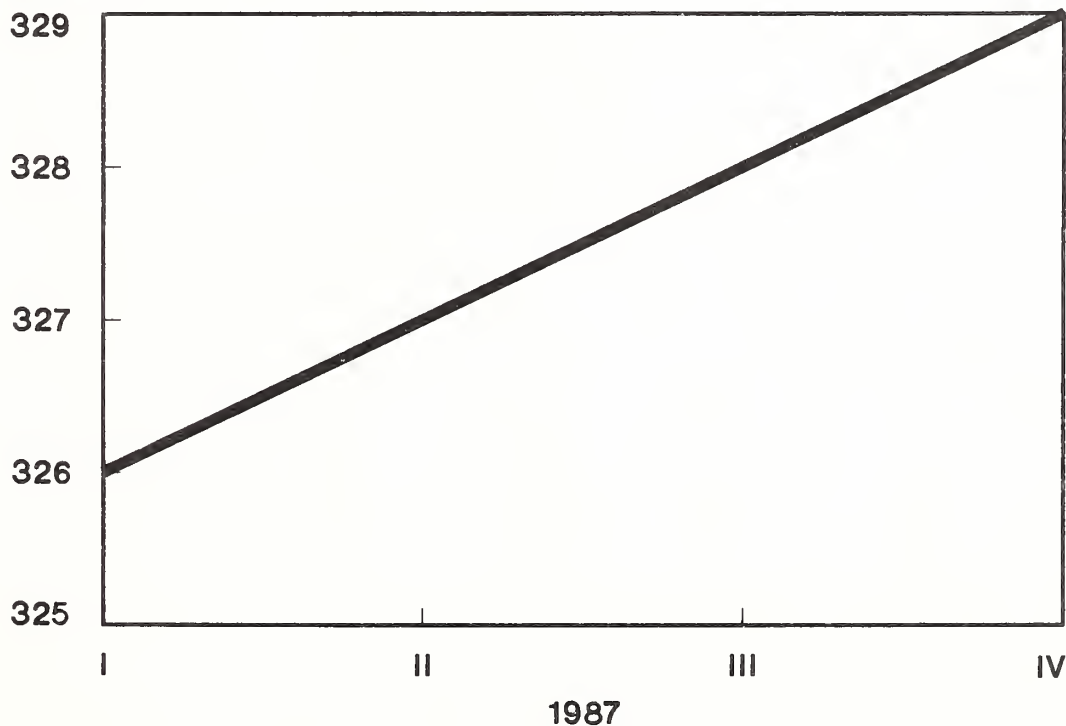
Latest year preliminary.

## 1987 Outlook for Food Prices

Ralph L. Parlett, Jr.

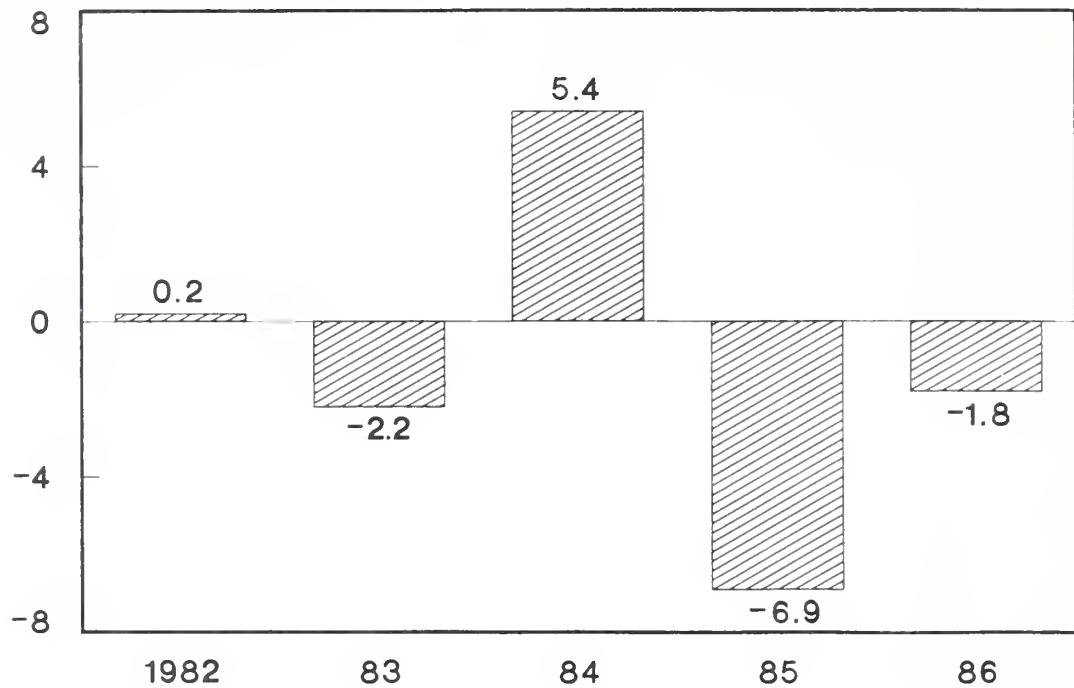
### All Food CPI

1967=100



## Farm Prices of Food Commodities

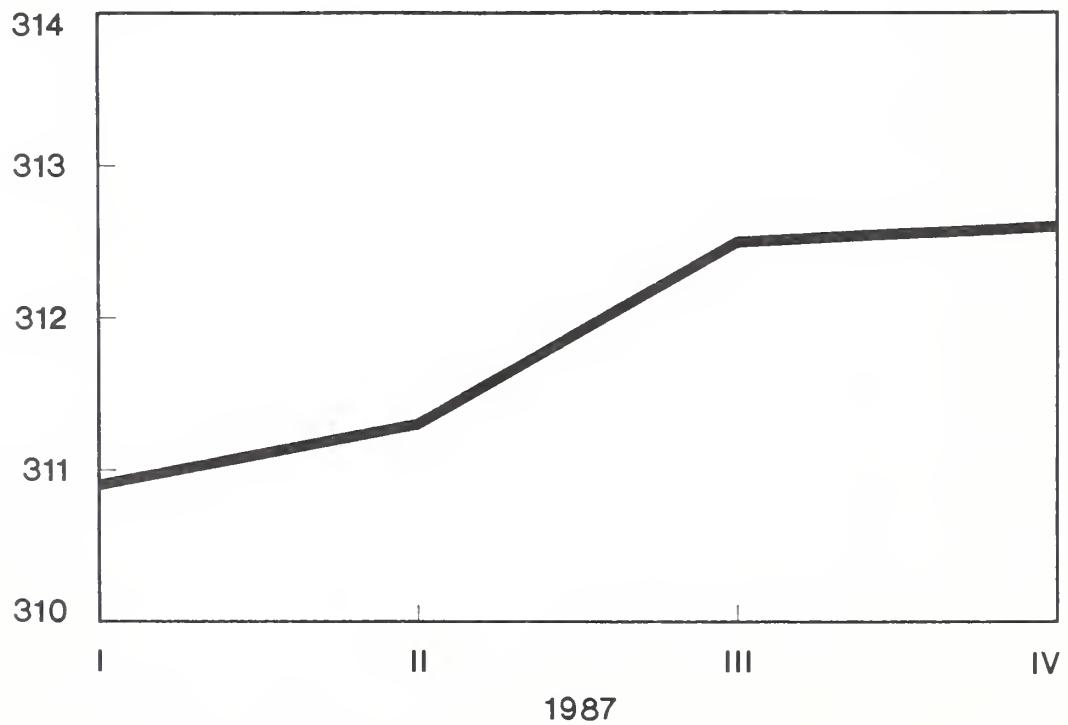
Annual percent change



1986 forecast.

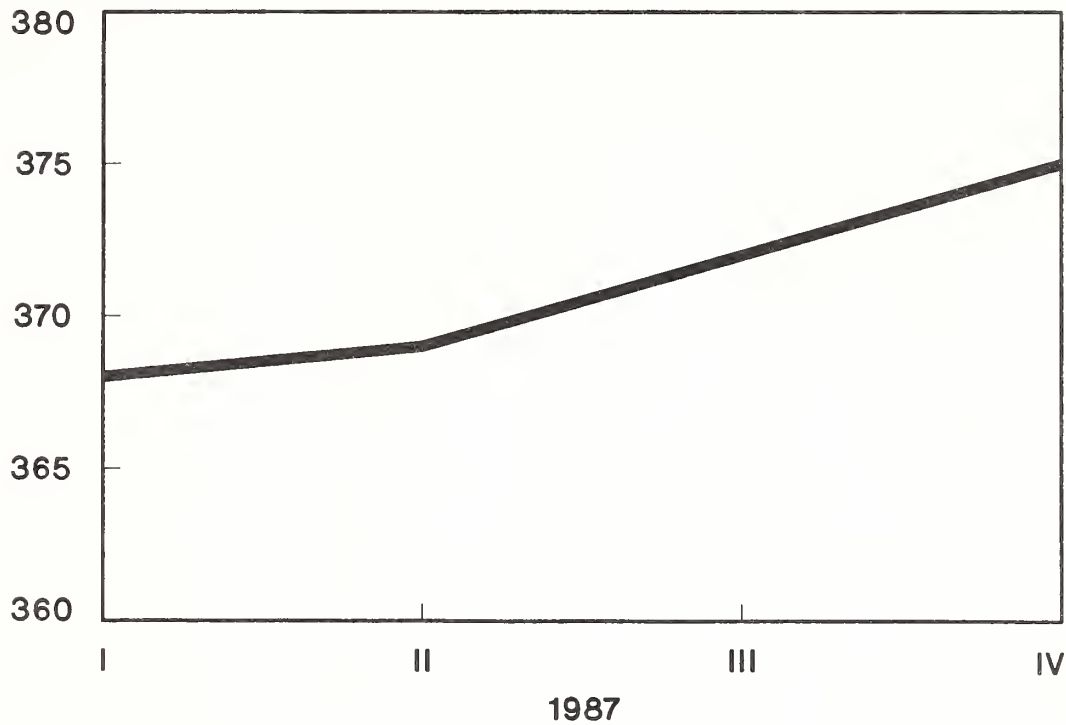
## Food At Home CPI

1967=100



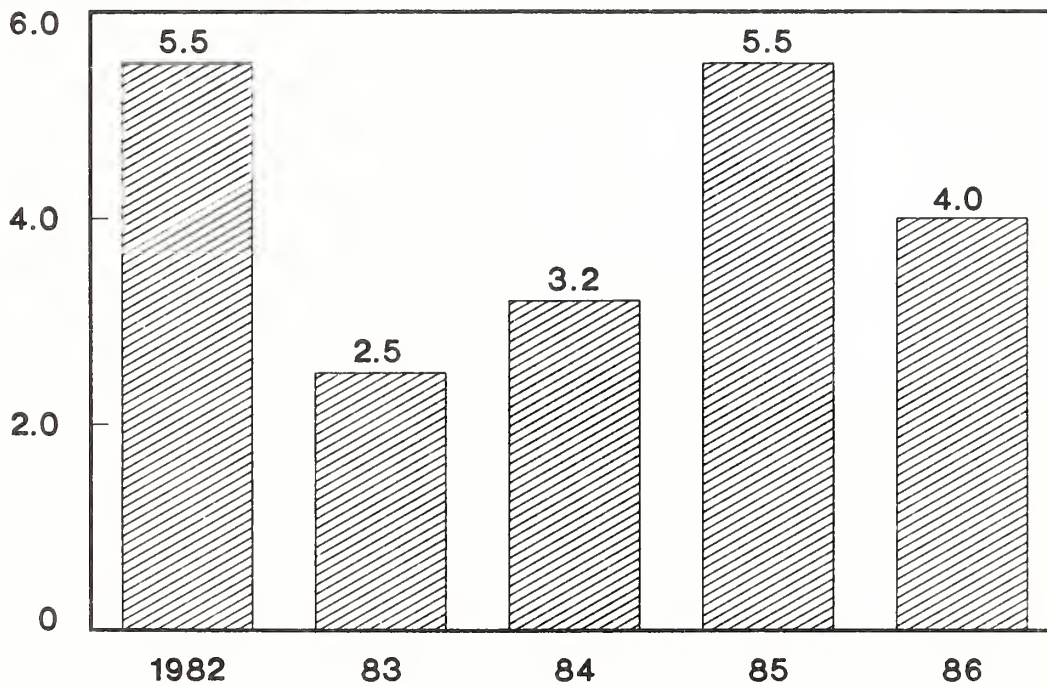
## Food Away From Home CPI

1967=100



## Food Processing and Distribution Charges

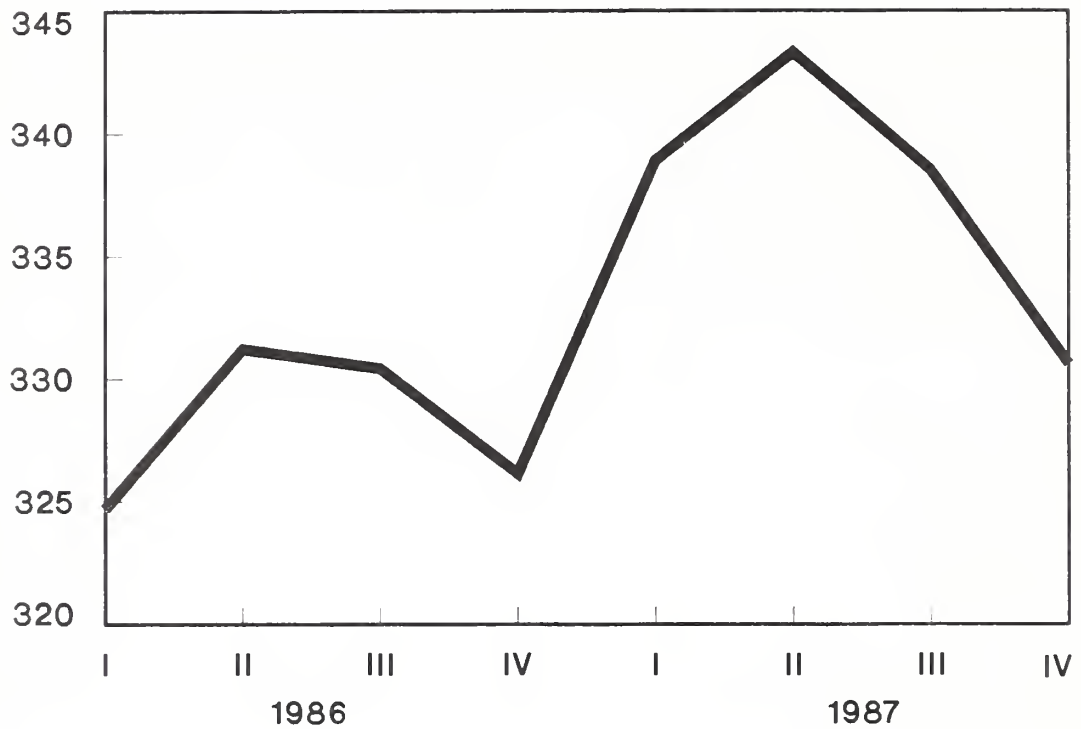
Annual percent change



1986 forecast.

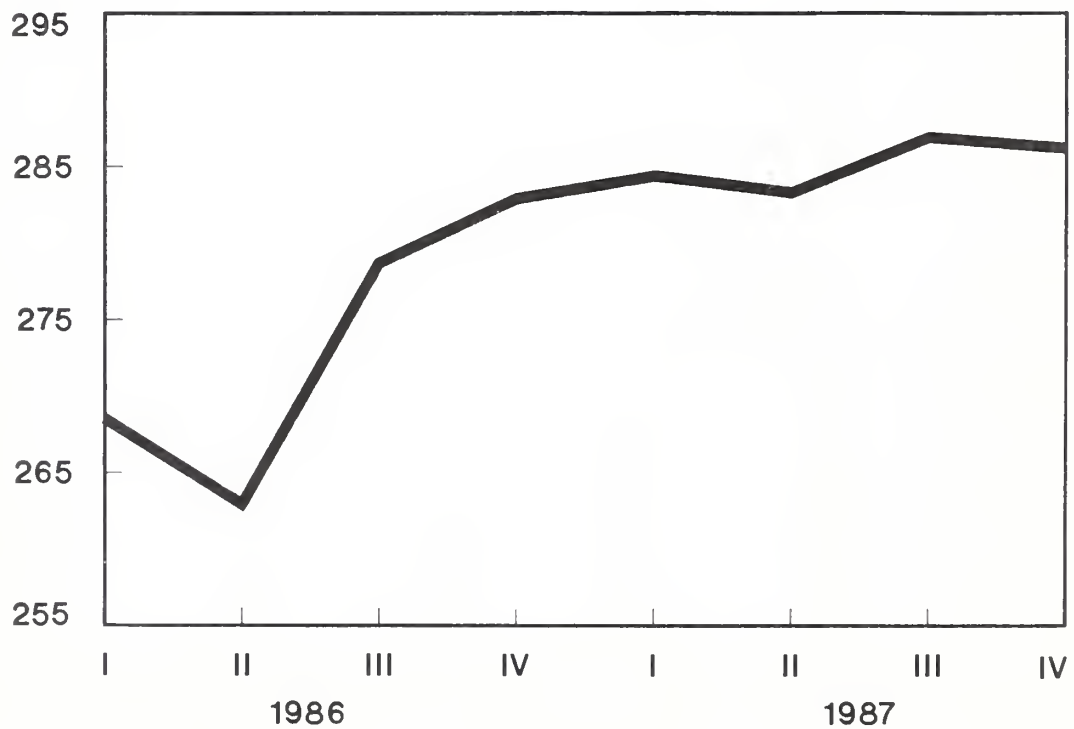
## Fruits and Vegetables CPI

1967=100



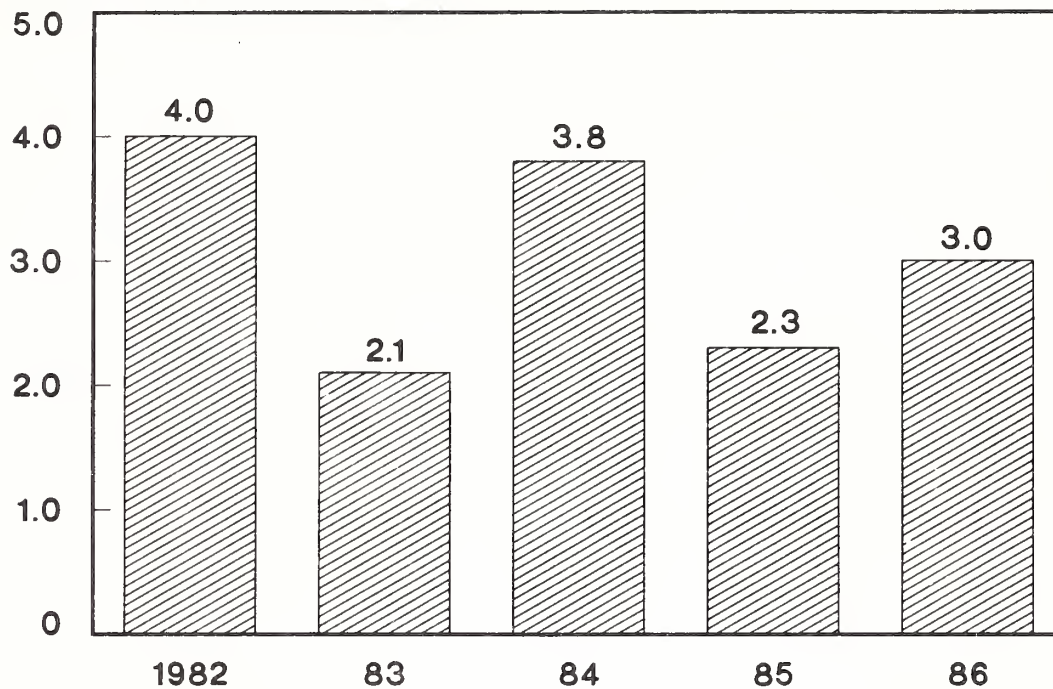
## Red Meat CPI

1967=100



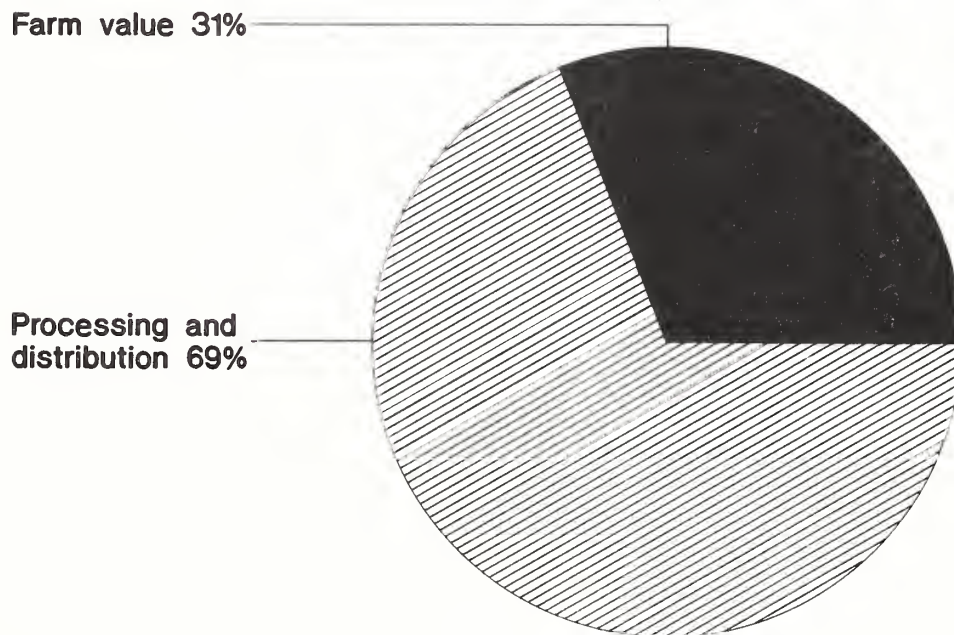
## Retail Food Prices

Annual percent change



1986 forecast.

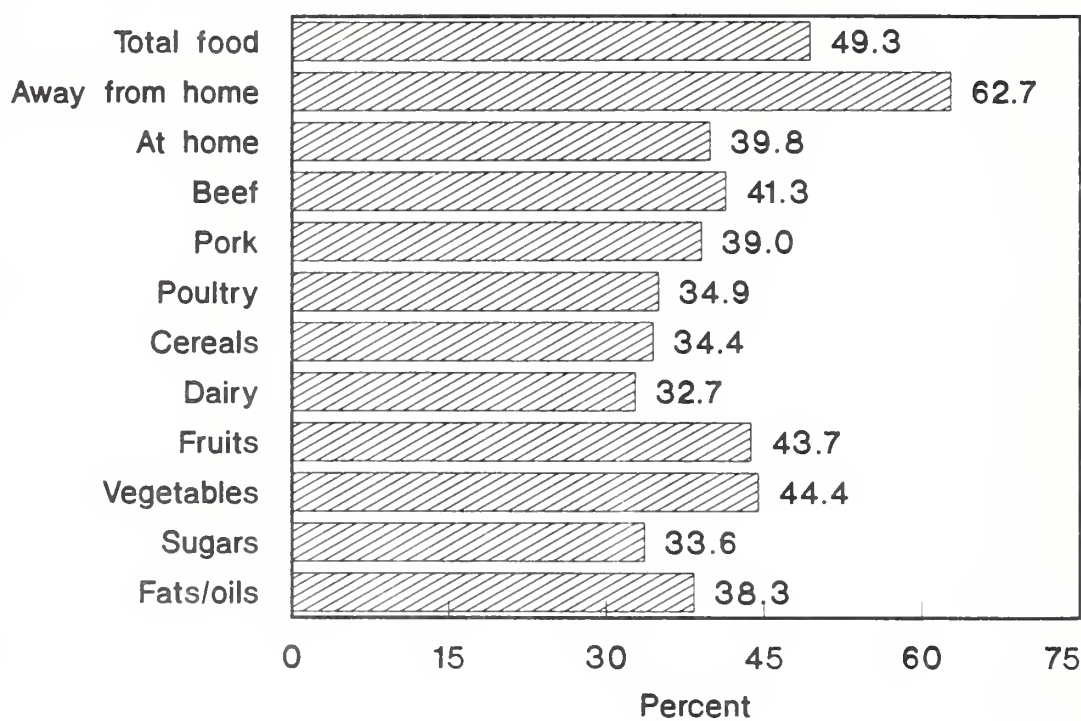
## Shares of the Food Dollar



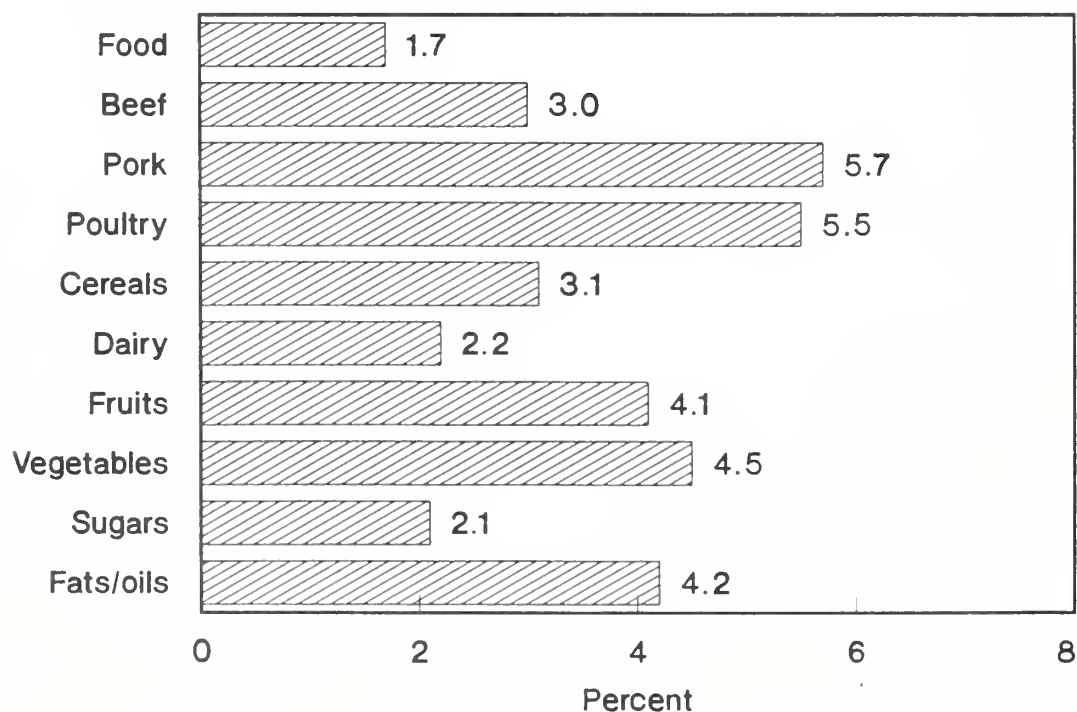
Average for all foods.



## Change in National Food Expenditures, 1980-2005

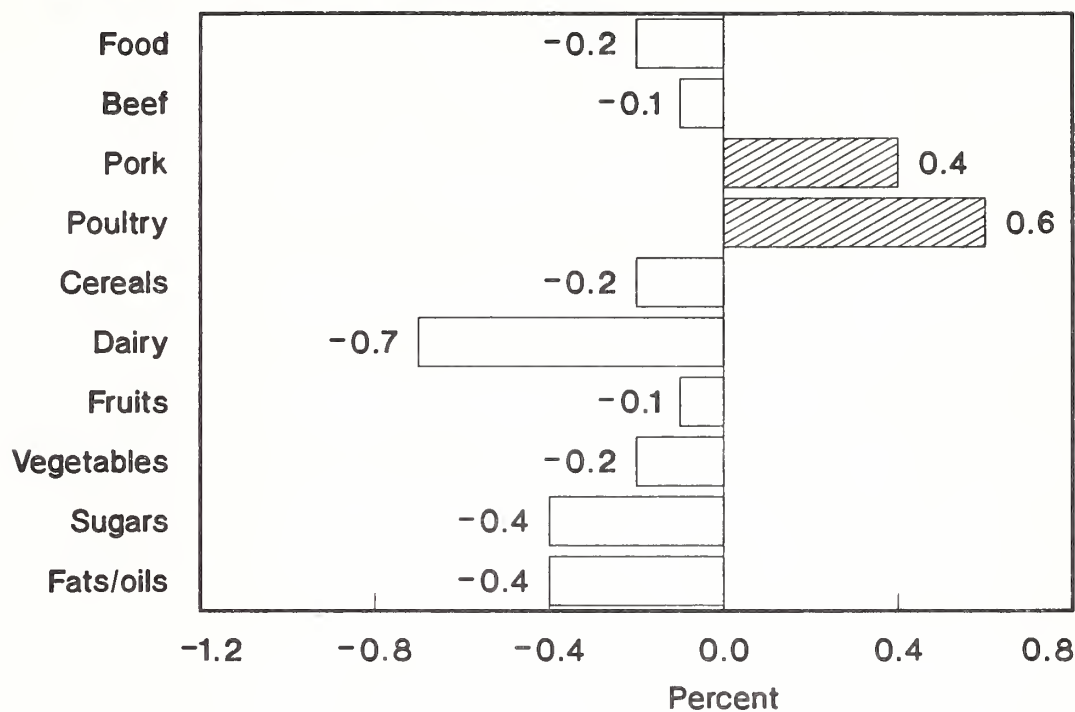


## Food Expenditure Change Due to Age Distribution, 1980-2005

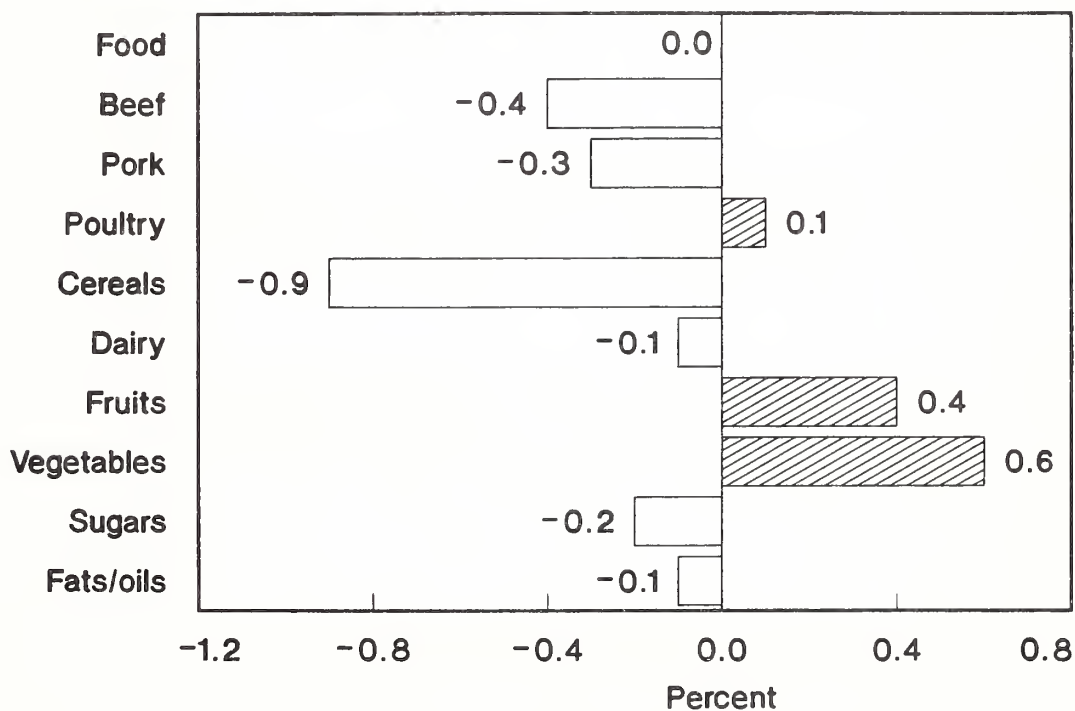




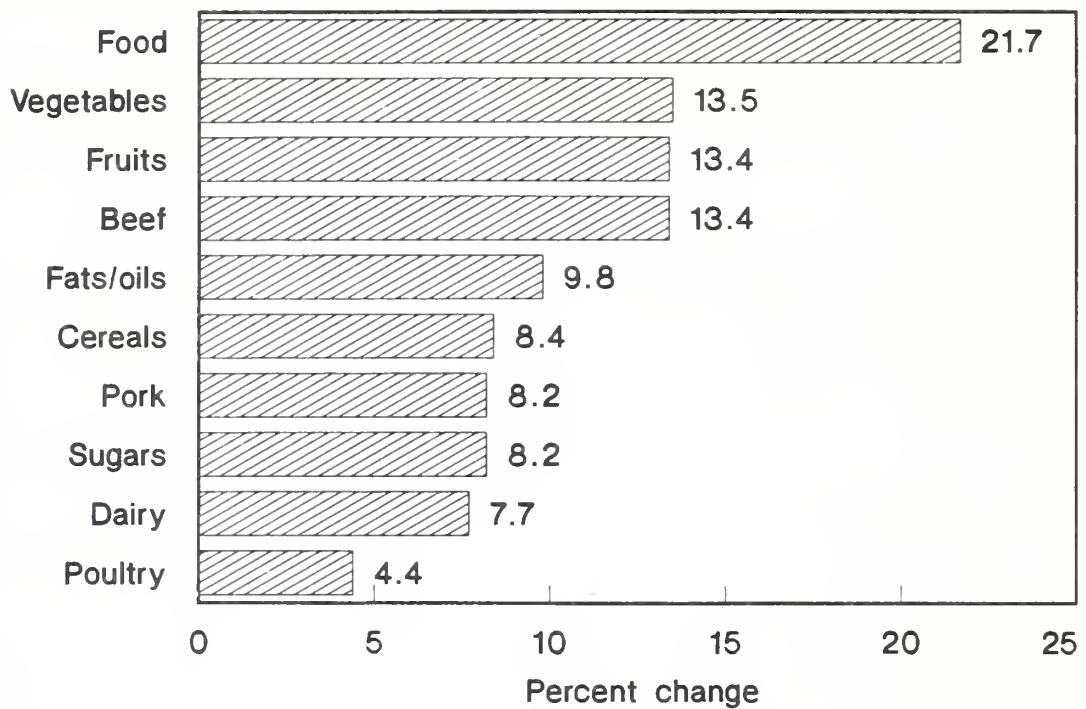
## Food Expenditure Change Due to Racial Balance, 1980-2005



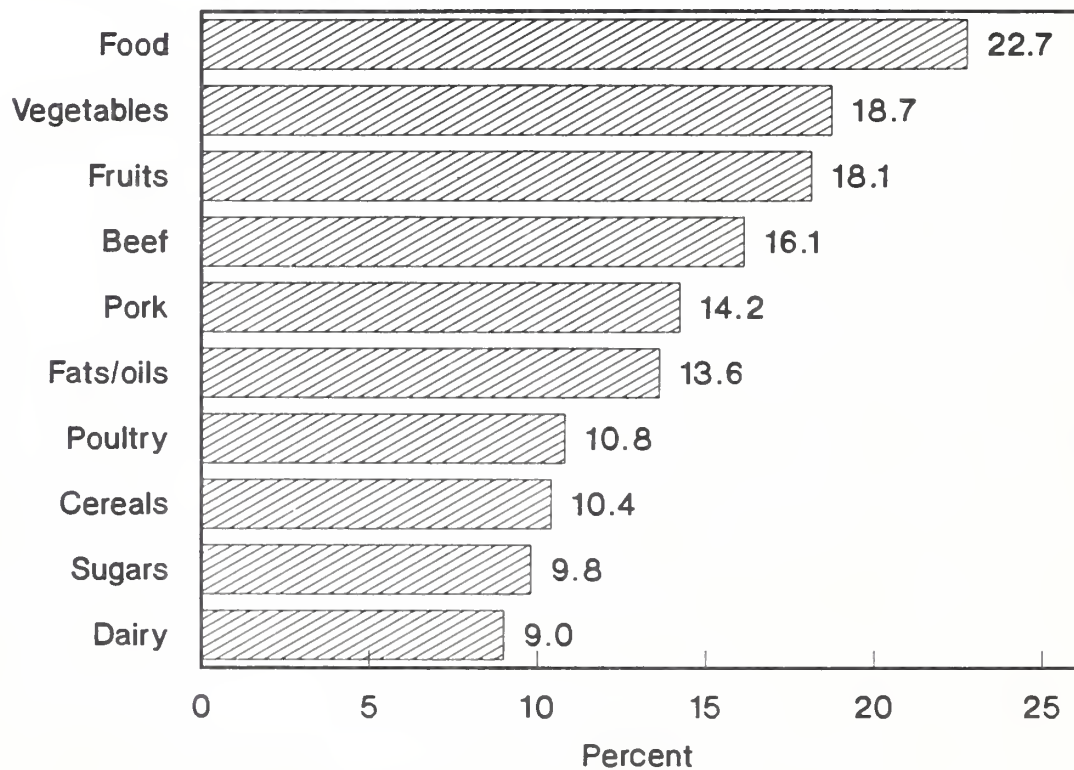
## Food Expenditure Change Due to Regional Change, 1980-2005



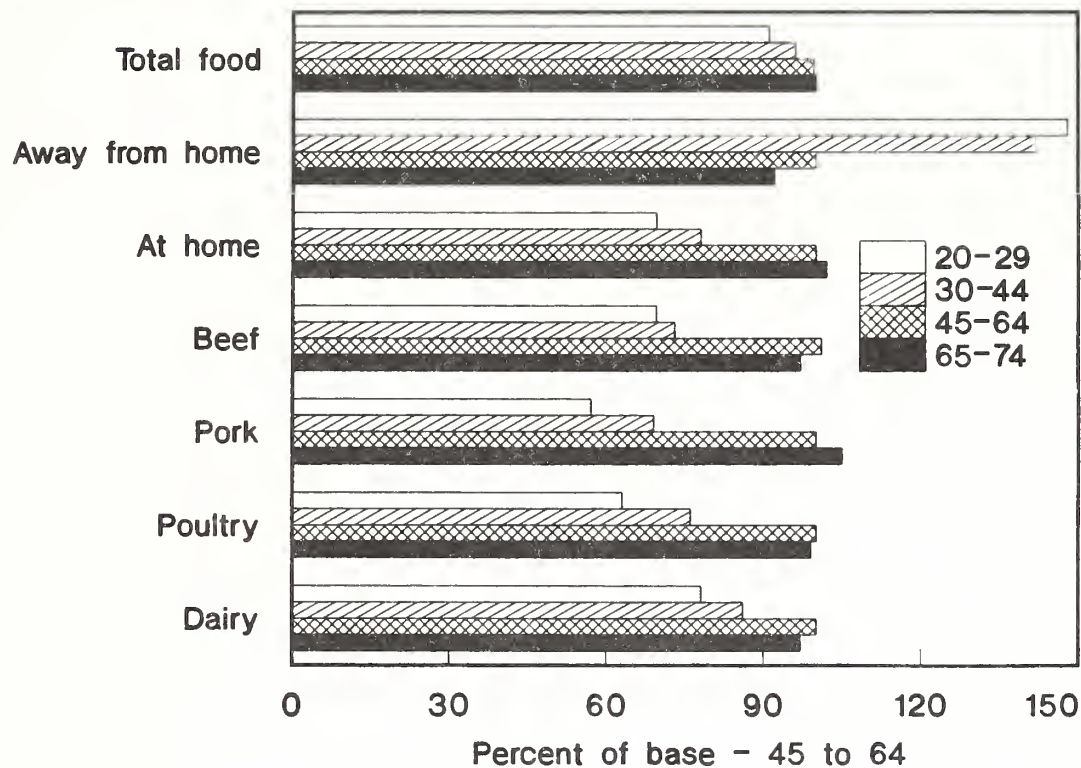
## Food Expenditure Change Due to Income Growth, 1980 -2005



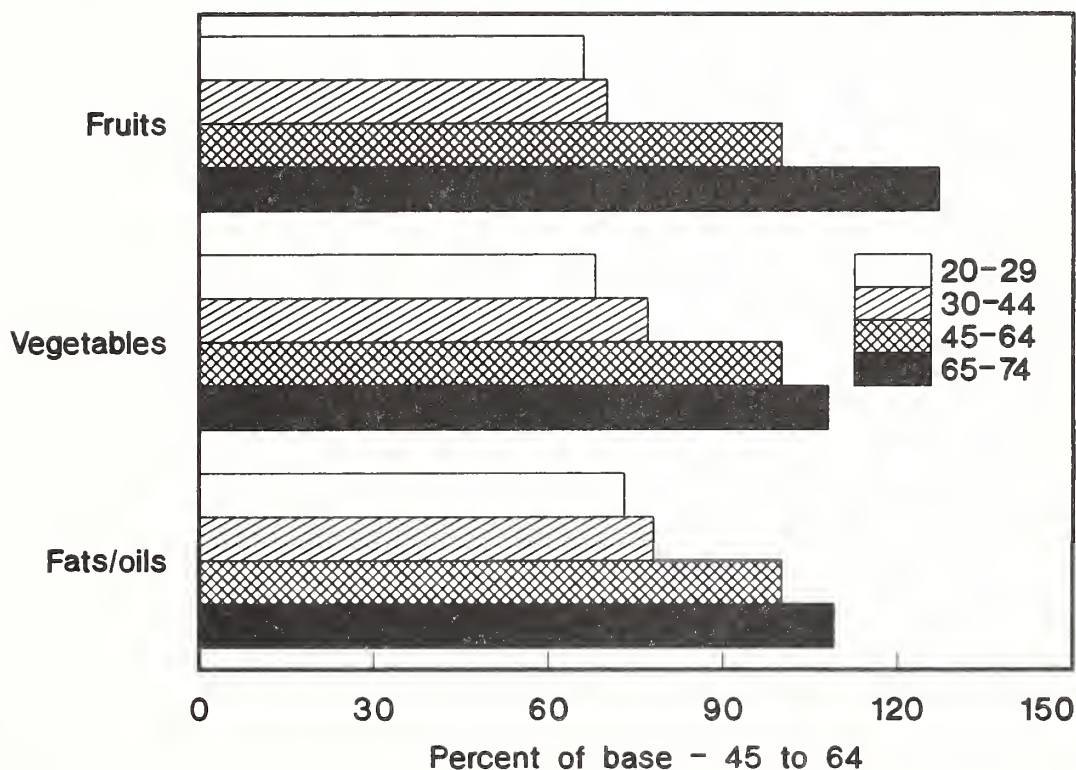
## Food Expenditures: Net Change 1980 -2005



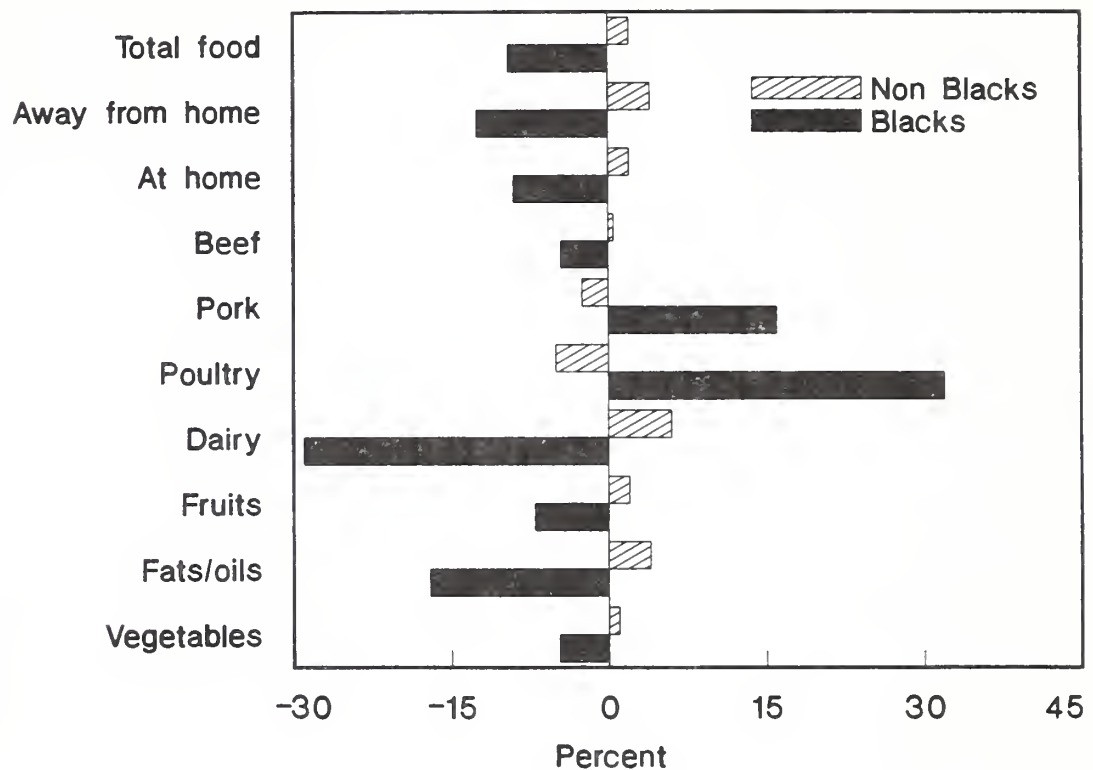
## Food Expenditures by Age Group, 1980 - 81



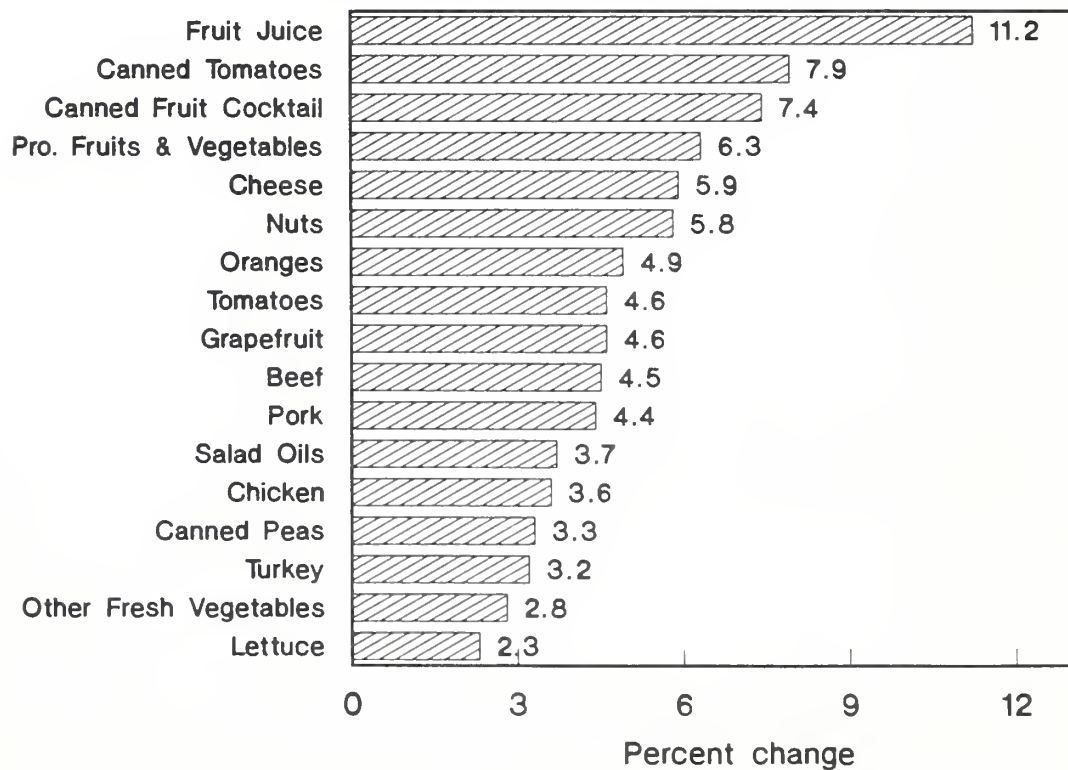
## Food Expenditures by Age Group, 1980- 81



## Food Expenditures by Race, 1980 - 81



## Food Purchases Which Increase with Income

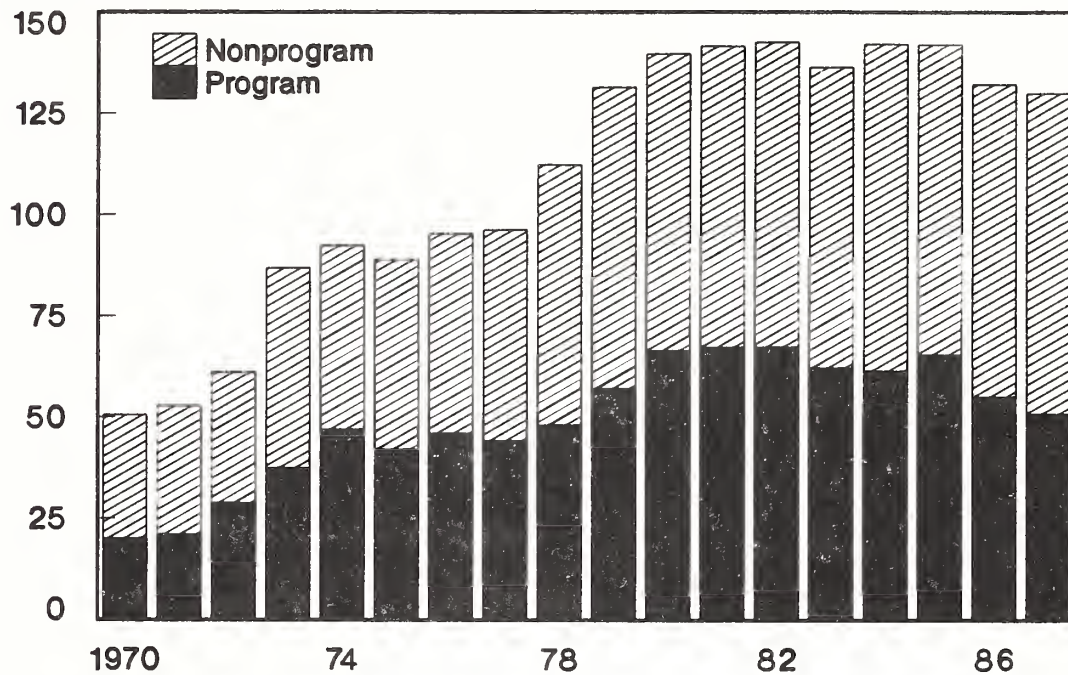






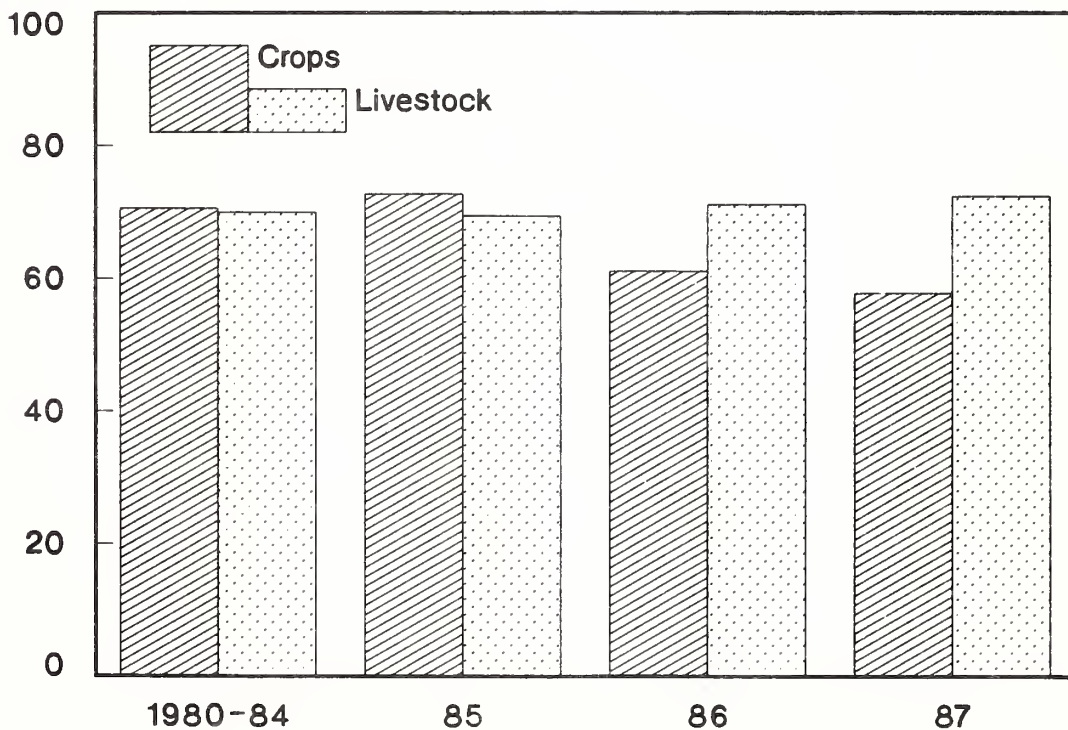
## Cash Receipts for Program and Nonprogram Commodities

\$ billion



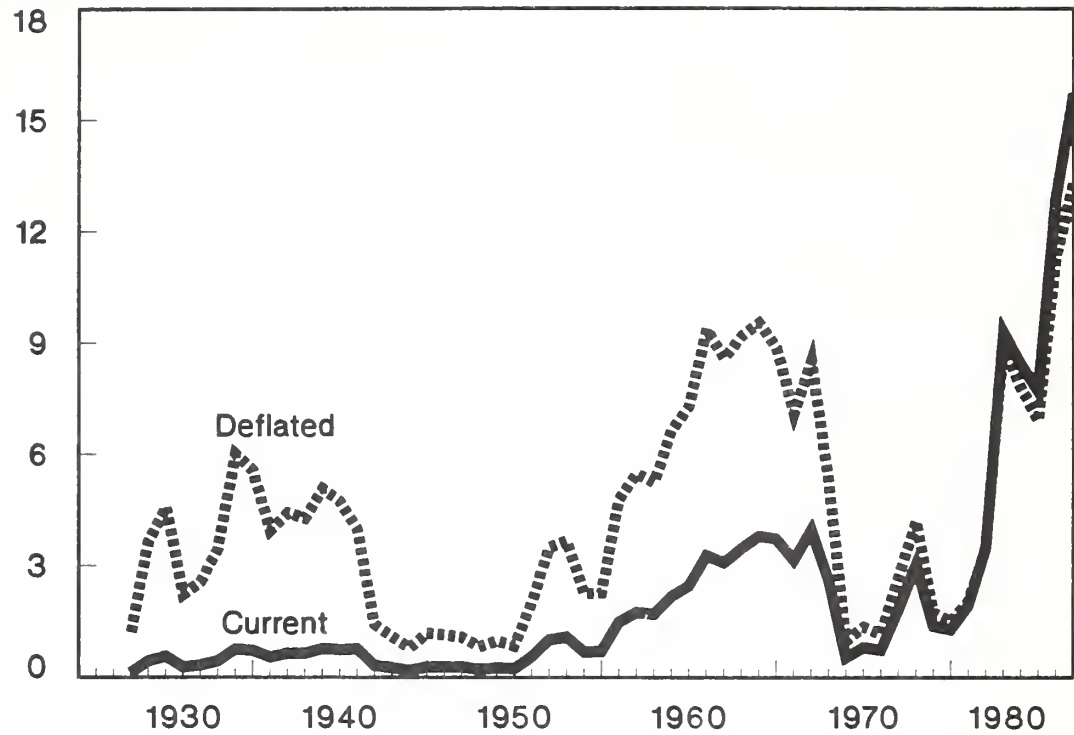
## Cash Receipts in the 1980's

\$ billion



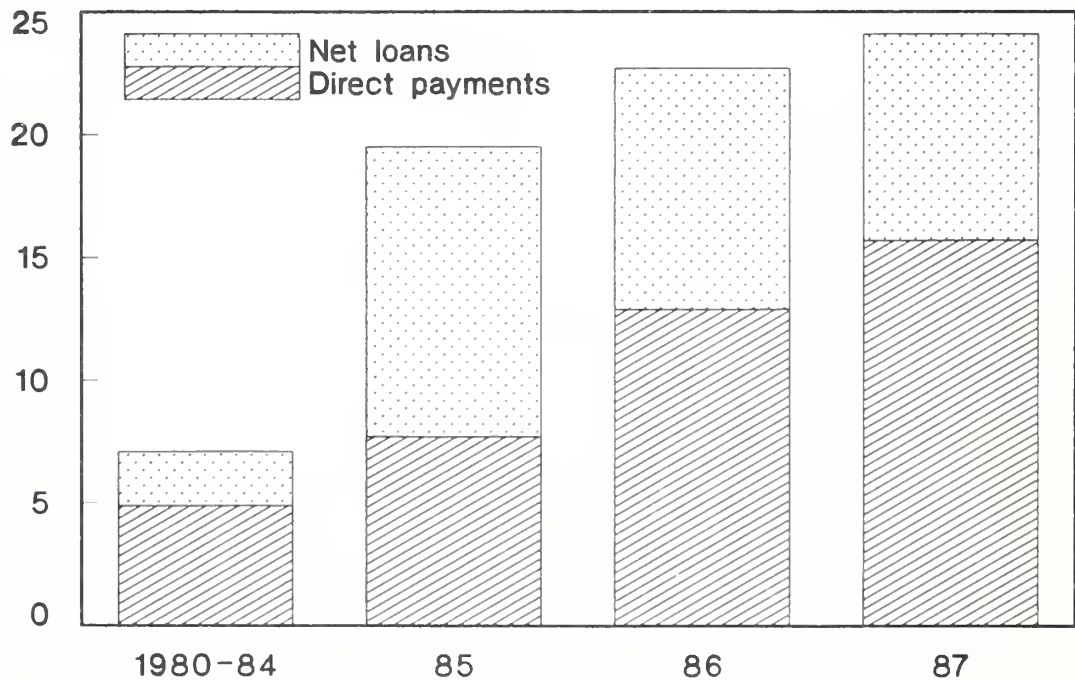
## Direct Government Payments

\$ billion



## Direct Government Payments and Net CCC Loans

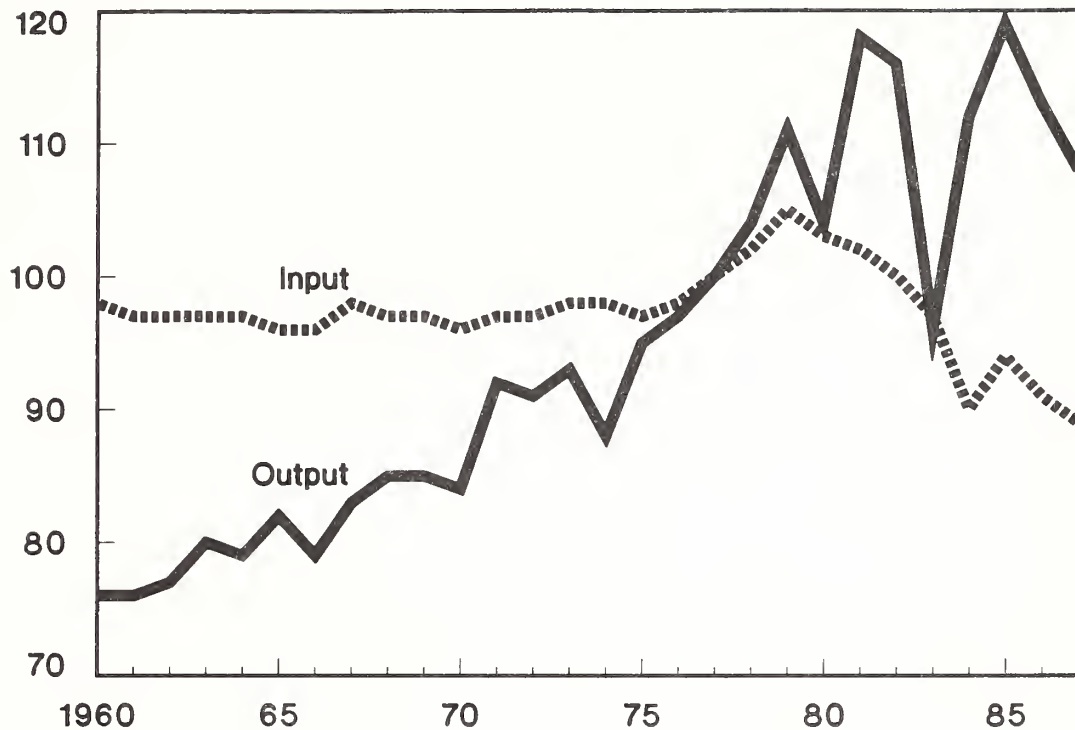
\$ billion





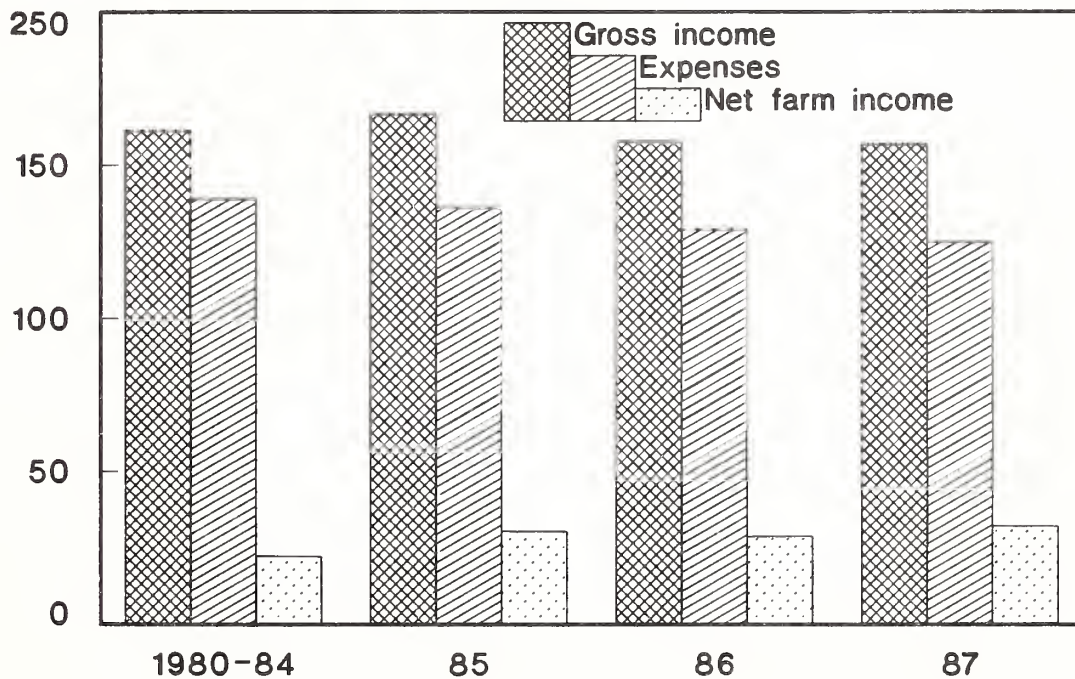
## Farm Output and Input

% of 1977

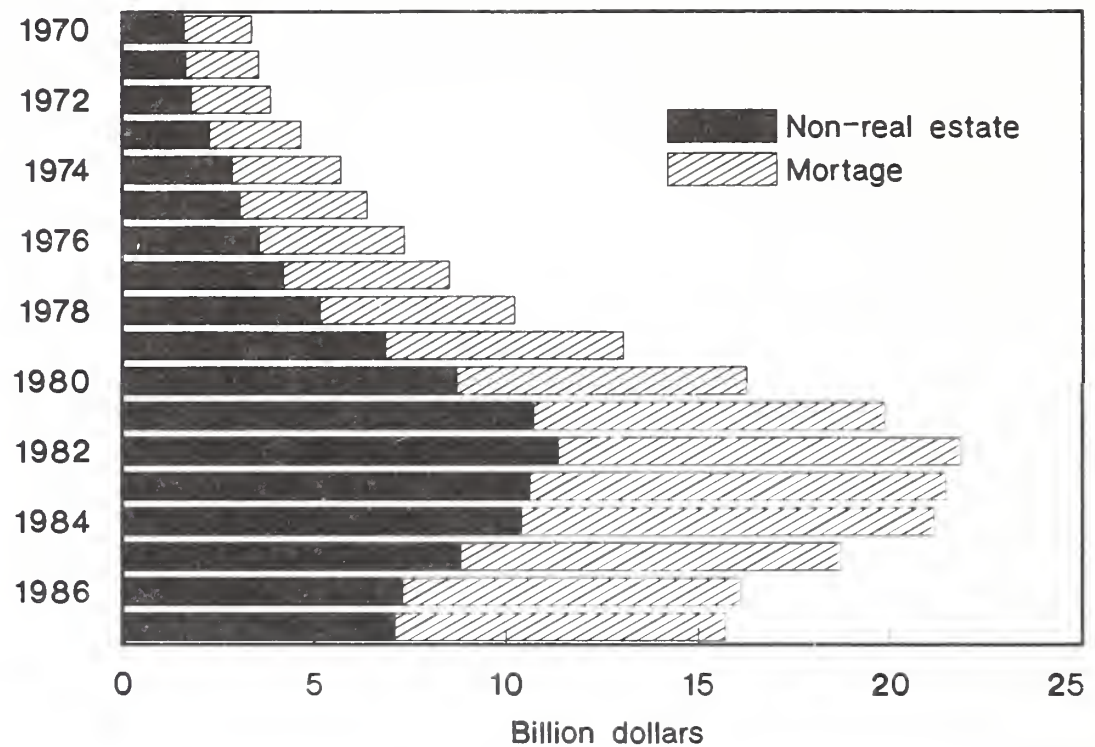


## Gross Income, Expenses, and Net Farm Income

\$ billion

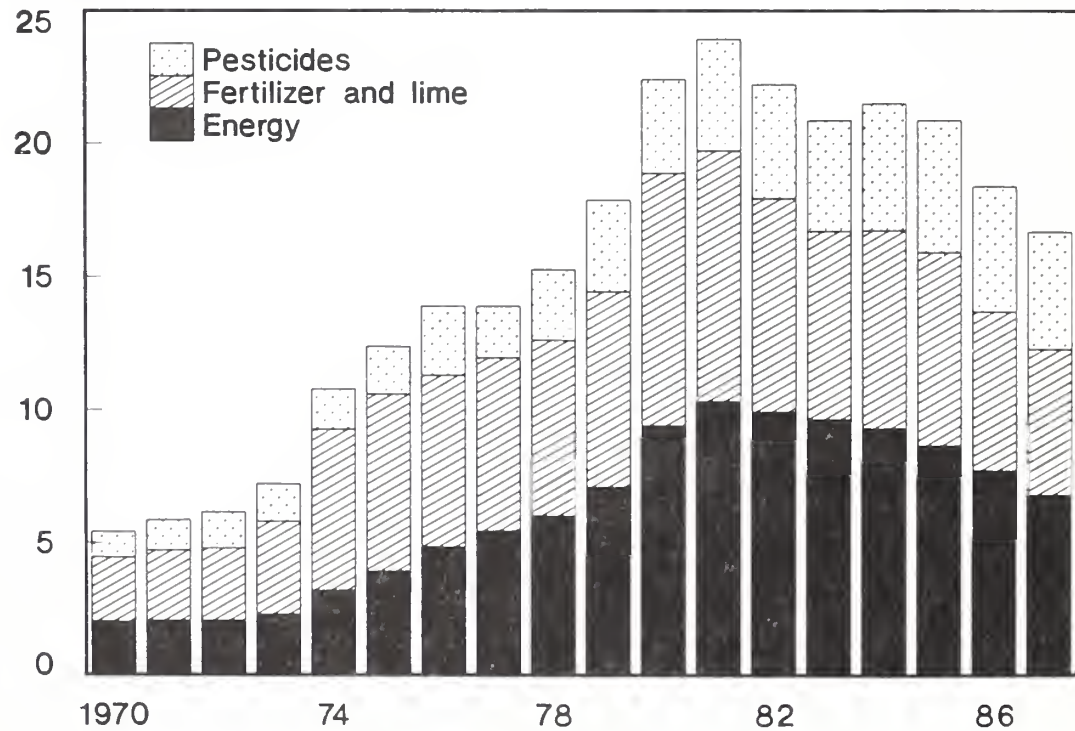


## Interest Expenses



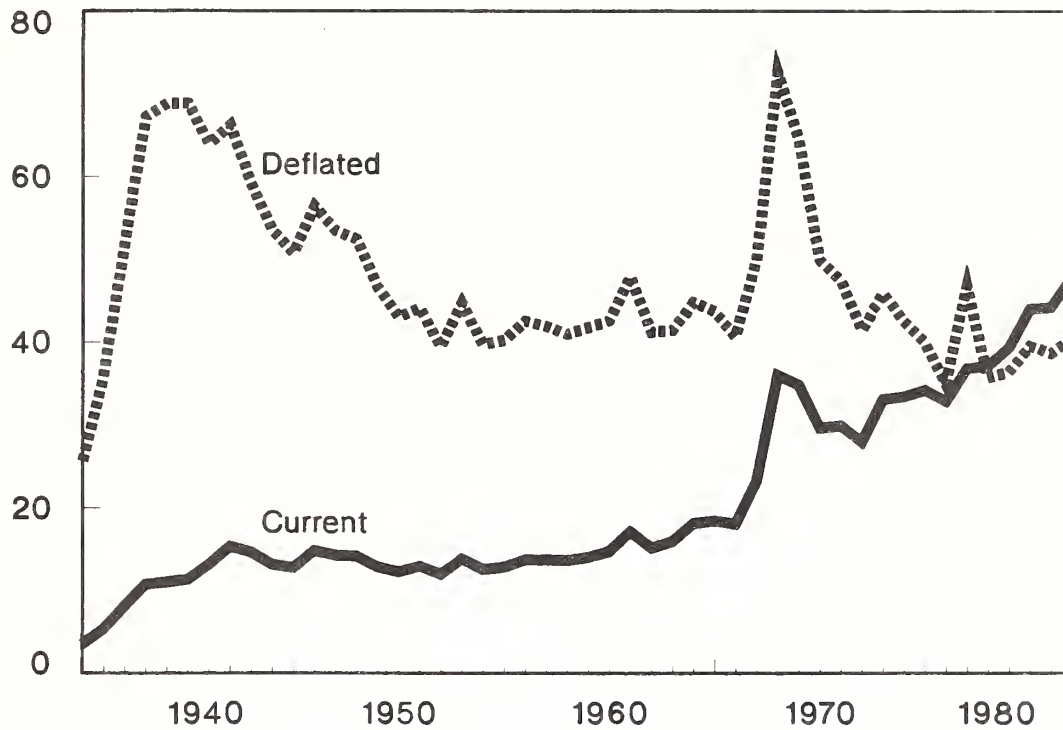
## Manufactured Input Expenses

\$ billion



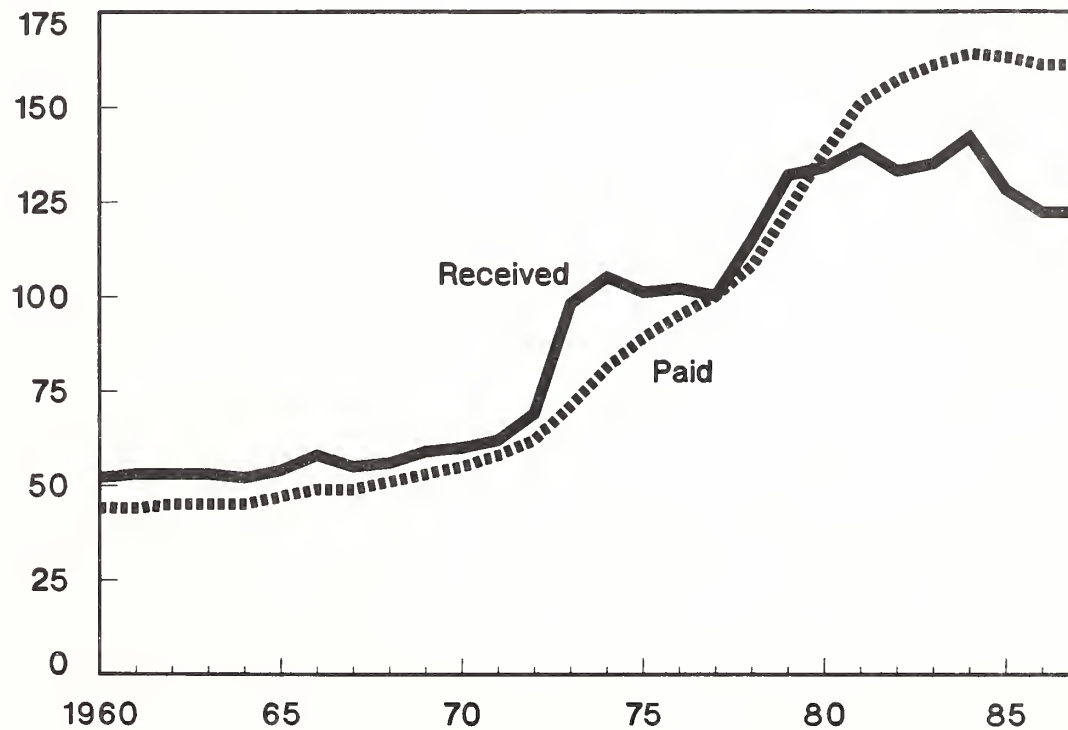
## Net Cash Income

\$ billion



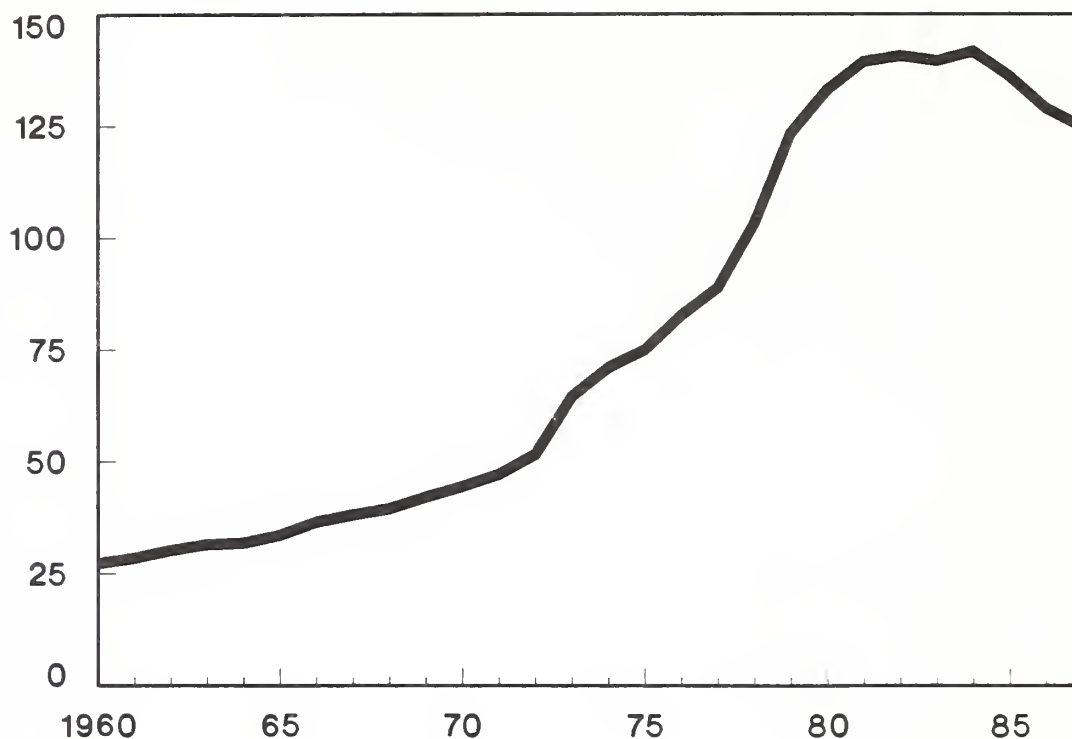
## Prices Received and Paid by Farmers

% of 1977



## Production Expenses

\$ billion



## U.S. Farm Income

	1985	1986 <sup>F</sup>	1987 <sup>F</sup>
	Billion dollars		
Gross cash income	156.2	150	150
Cash expenses	112.1	106	103
Net cash income	44.0	44	48
Nonmoney income	10.0	7	6
Noncash and household expenses	24.0	23	22
Net farm income	30.5	28	32
(Deflated 1982 \$)	27.3	25	27

F = Forecast.

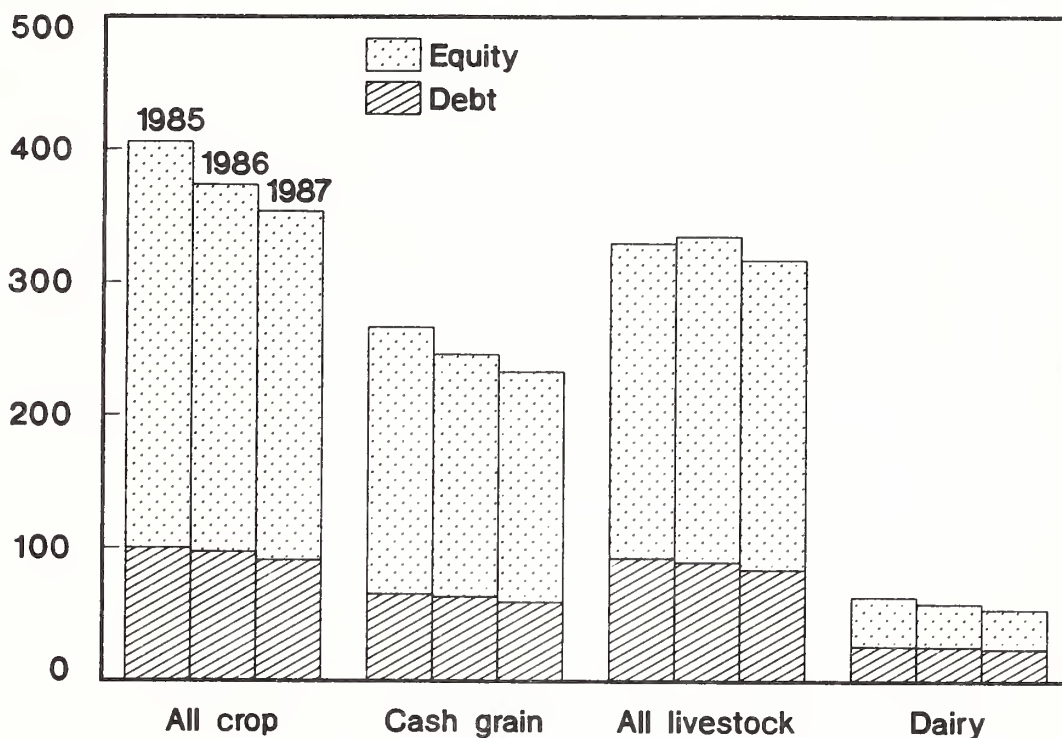
Totals may not sum due to rounding.



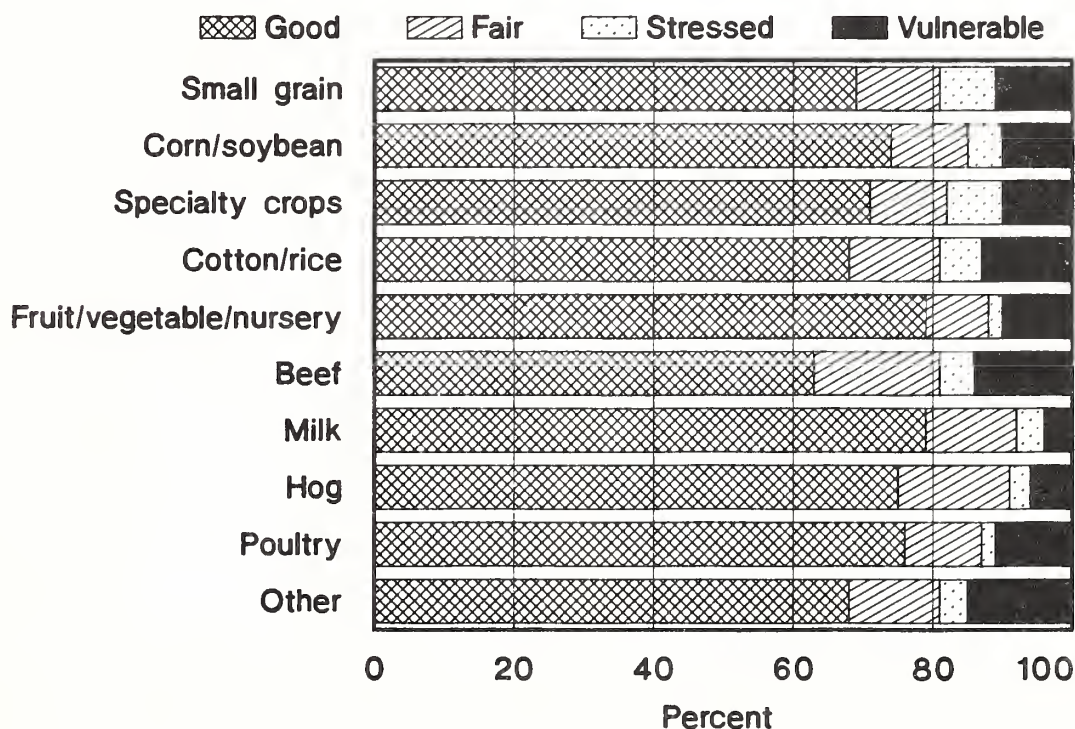


## Balance Sheet Components by Type of Farm

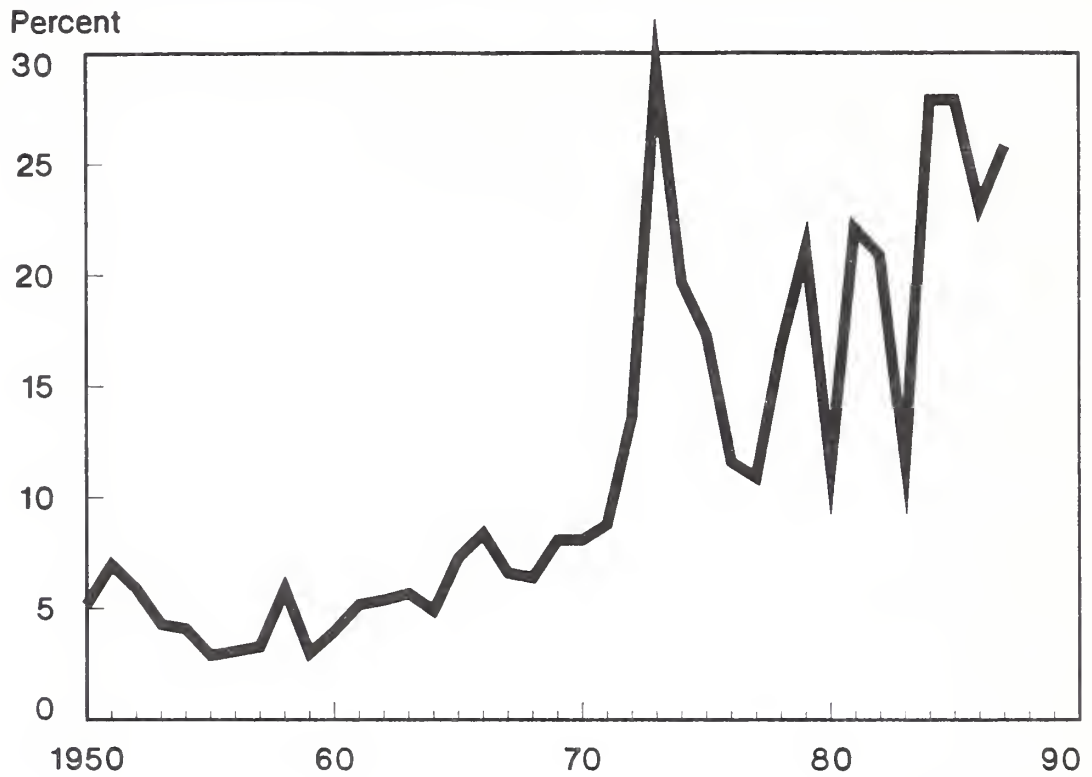
\$ billion



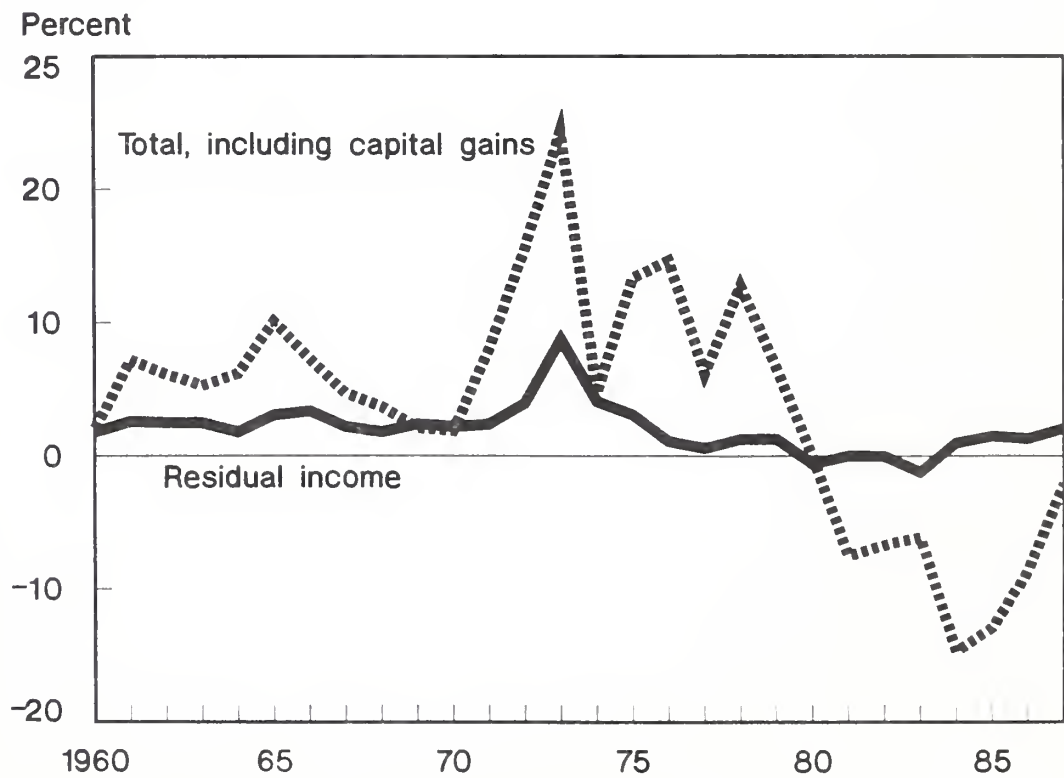
## Commercial Farms by Type and Financial Condition, 1985



## Rate of Return to Farm Production Assets

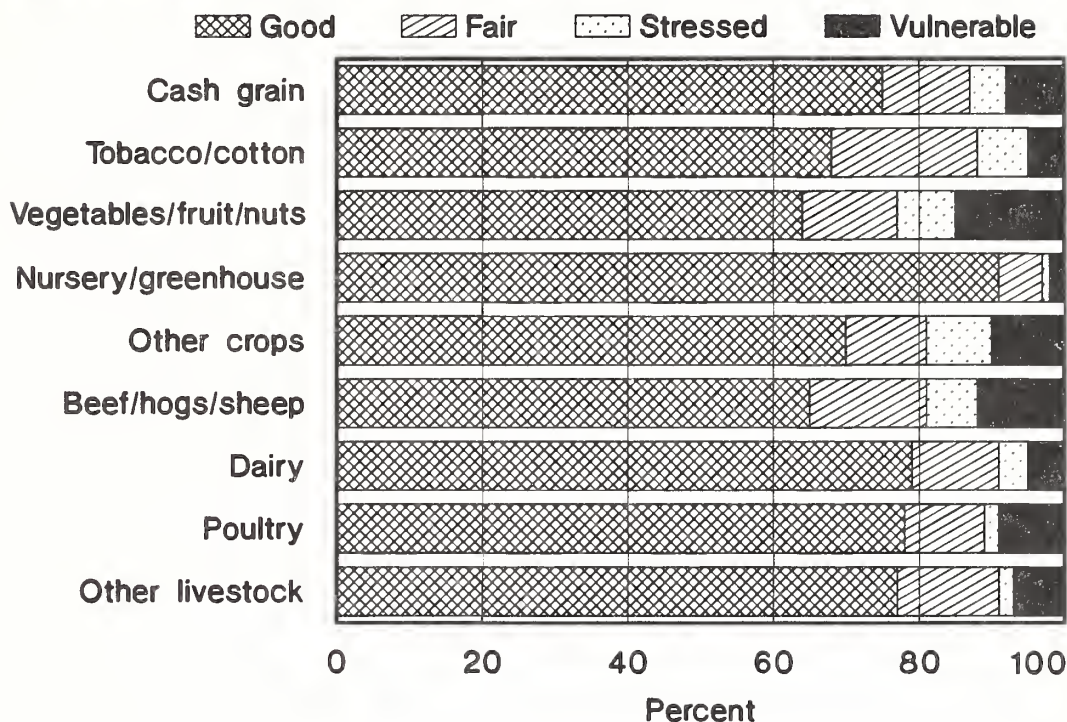


## Return to Equity

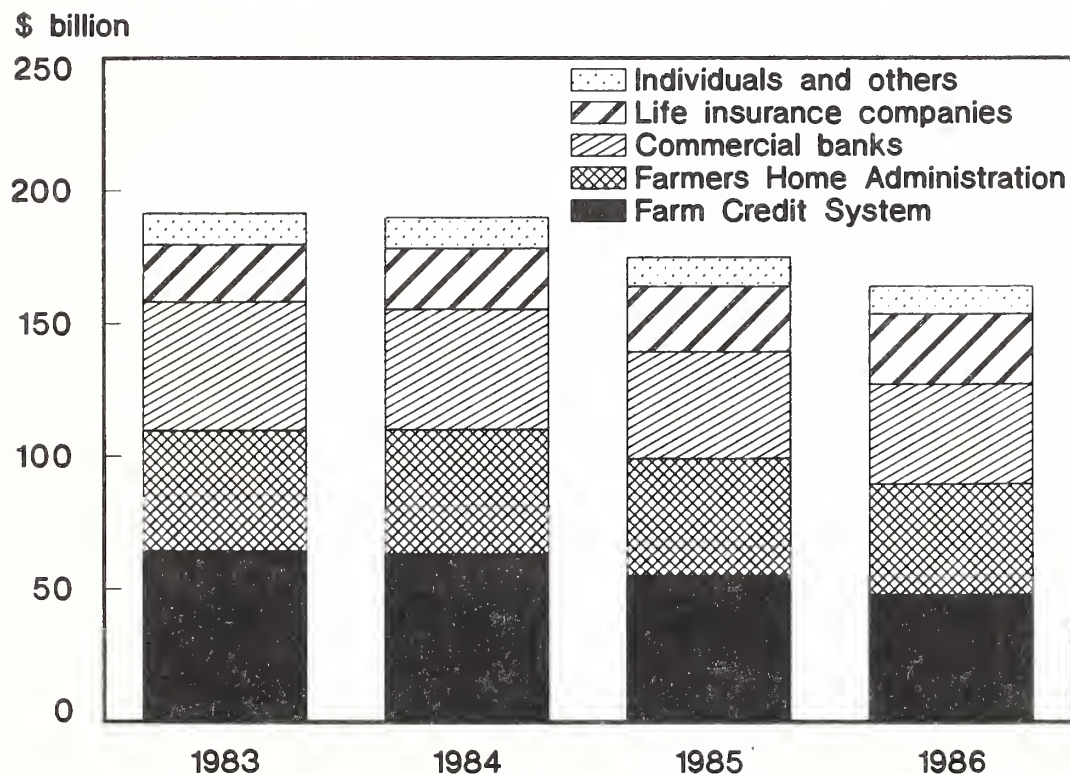




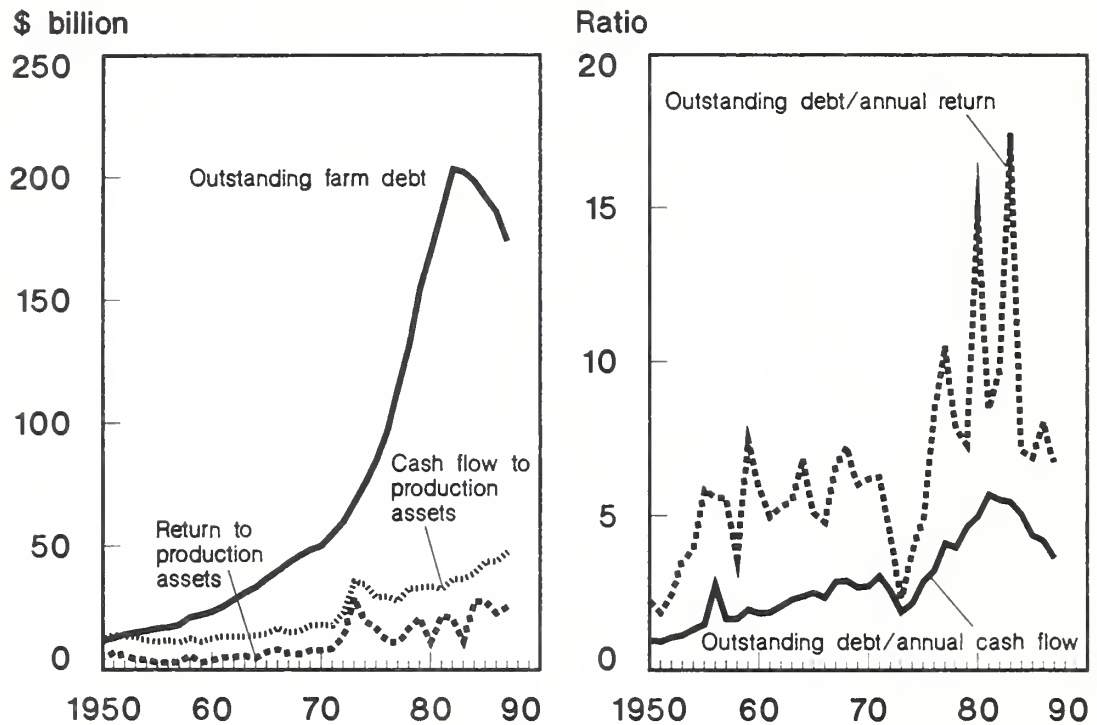
## Farms Selling \$40,000+ by Type and Financial Condition, 1985



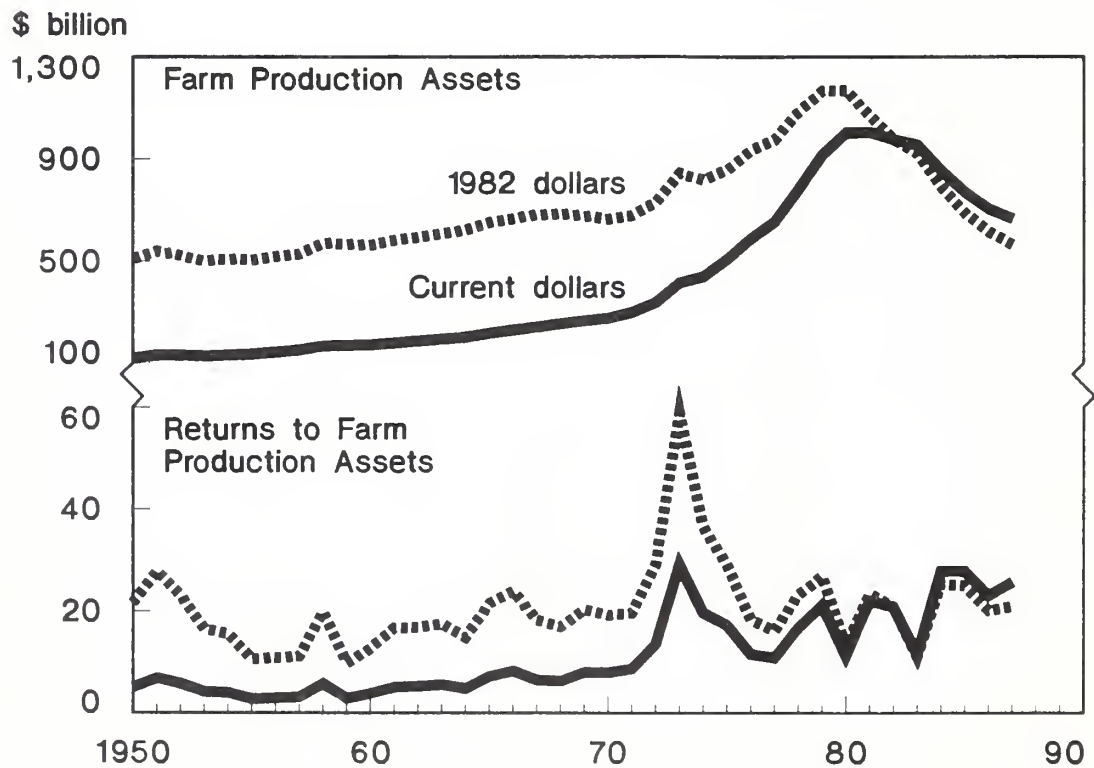
## Non-CCC Farm Debt by Type of Lender



# Farm Debt Compared with Income Flows to Farm Production Assets

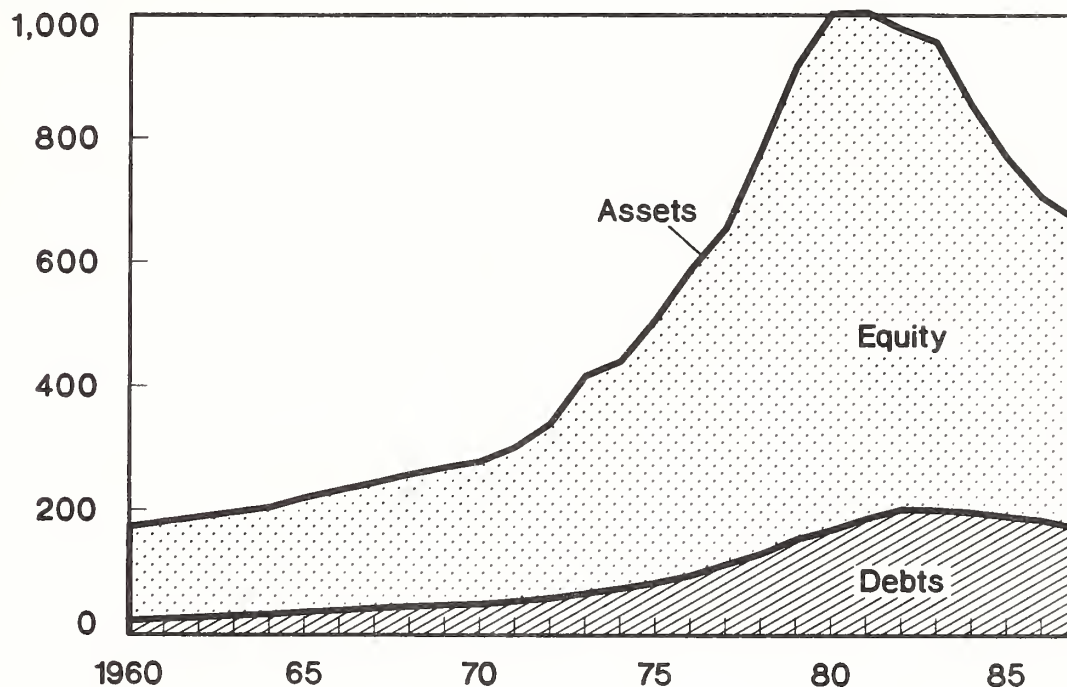


## Farm Production Assets and Returns



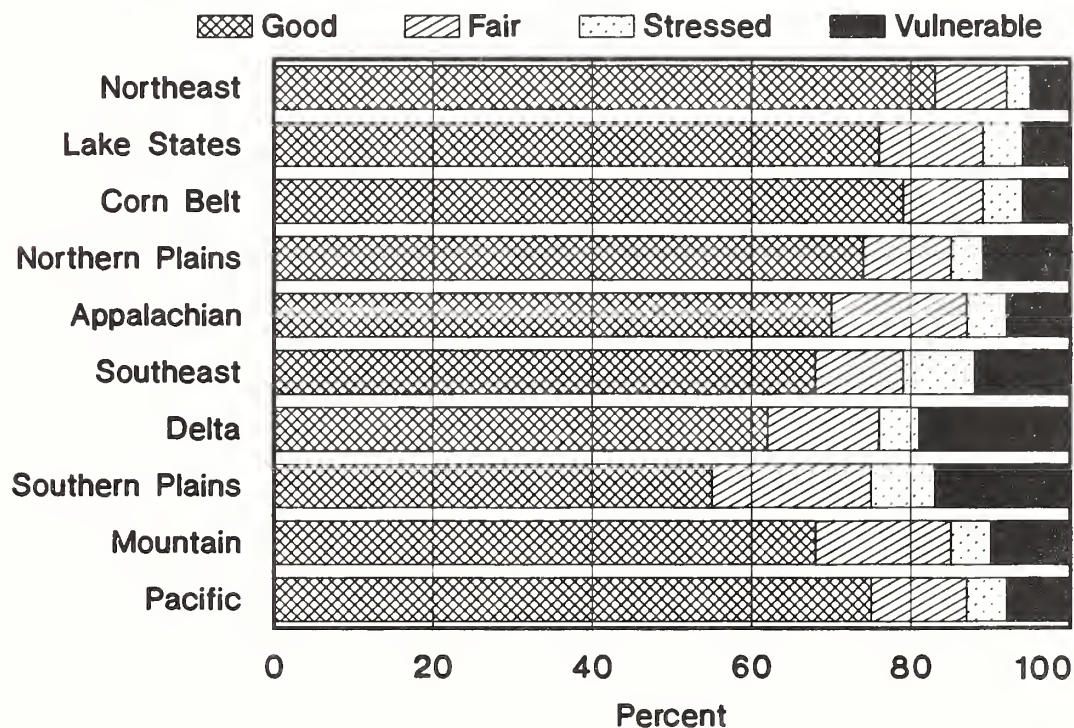
# Farm Sector Assets, Debts, and Equity

\$ billion



Excludes dwellings.

## Farms Selling \$40,000+ by Region and Financial Condition, 1985





## Distribution of Balance Sheet Components by Farm Type

Income component	Crops			Livestock		
	All	Grain	Cotton	All	Beef-Hogs	Dairy
<b>Assets</b>	43	27	4	57	37	14
Land and buildings	42	25	4	58	39	11
Livestock and poultry	13	9	2	87	49	30
Crops	68	55	2	32	18	12
Machinery and equipment	56	39	5	44	25	16
<b>Liabilities</b>	53	37	4	47	26	17
<b>Equity</b>	40	24	4	60	40	13

## Distribution of Commercial Farm Operators by Financial Position<sup>1</sup>

Financial position and year	Operators	Assets	Debt	Banks Percent	Debt owed to		
					Farm Credit System	Farmers Home Adm.	Other Lenders <sup>2</sup>
<u>Good</u>							
1984	70	65	51	47	53	39	NA
1985	74	66	57	57	58	46	58
<u>Fair</u>							
1984	13	18	16	15	15	18	NA
1985	13	21	18	16	17	22	20
<u>Stressed</u>							
1984	7	7	10	13	12	12	NA
1985	5	5	8	9	8	8	7
<u>Vulnerable</u>							
1984	10	10	23	25	20	31	NA
1985	9	8	18	19	17	24	16

1/ Classification scheme by Emil Melichar.

2/ Excludes debt owed to CCC.

·NA=Comparable data not available.

## Distribution of Income Sources by Farm Type

Income component	Crops			Livestock		
	All	Grain	Cotton	All	Beef- Hogs	Dairy
Crop sales	91	46	9	9	6	2
Livestock sales	9	7	1	91	41	34
Government payments	76	62	10	24	14	9
Farm origin	18	12	1	82	47	20
Manufactured inputs	68	45	7	32	18	11
Labor and machine hire	62	18	7	38	16	16
Interest	52	36	4	48	27	17
Total expenses, excluding depreciation	48	30	5	52	29	16
Total expenses	47	29	5	53	29	16

## Farm Income, Return, Assets, and Debts

	1970	1975	1980-84* \$ billion	1985	1986 <sup>F</sup>	1987 <sup>F</sup>
Gross farm income	55.8	95.4	149.1	156.1	150.4	151.0
Returns to operator	13.1	23.2	16.3	25.7	24.2	27.8
Returns to assets, labor, mgmt	18.4	33.6	42.0	51.1	45.8	48.9
Returns to assets	8.1	17.6	19.5	28.6	18.6	21.4
Returns to equity	4.9	11.2	-0.6	9.9	3.3	6.4
Equity in assets	221.6	366.3	788.1	657.3	579.3	525.2
% return to equity	2.2	3.1	-0.1	1.5	0.6	1.2
Total farm assets	270.5	442.3	972.2	856.1	771.4	702.0
% return to assets	3.0	4.0	2.0	3.3	2.4	3.0

\* Average for period.

## Farm Income, Return, Assets, and Debts

	Average for period				1985	1986 <sup>F</sup>	1987 <sup>F</sup>
	1970-71	1972-74	1975-79	1980-84 \$ billion			
Gross farm income	57.3	85.4	111.1	149.1	156.3	150.4	150.5
Returns to operator	13.4	25.4	20.3	16.3	25.7	24.7	28.7
Returns to assets, labor, mgmt	18.8	33.9	33.3	42.0	51.1	46.8	50.0
Returns to assets	8.5	20.8	15.8	18.8	27.9	23.1	25.8
Returns to equity	5.2	16.3	6.8	-0.6	9.9	7.7	10.8
Equity in assets <sup>1</sup>	225.7	293.3	495.6	788.1	657.3	579.3	521.4
% return to equity	2.3	5.6	1.5	-0.1	1.5	1.3	2.1
Total farm assets <sup>1</sup>	275.4	354.5	596.6	972.2	856.0	771.4	706.7
% return to assets	3.1	5.9	2.7	2.0	3.3	3.0	3.7

<sup>1/</sup> December 31 of previous year.

## Farm Income, Return, Assets, and Debts

	Average for period				1985	1986 <sup>F</sup>	1987 <sup>F</sup>
	1970-71	1972-74	1975-79	1980-84 Billion 1982 dollars			
Gross farm income	132.7	170.3	162.4	152.3	139.9	131.4	127.3
Returns to operator	31.1	50.7	30.1	16.5	23.0	21.6	24.3
Returns to assets, labor, mgmt	43.4	67.5	48.9	42.6	45.7	40.9	42.3
Returns to assets	19.6	41.6	22.8	18.9	25.0	20.2	21.8
Returns to equity	12.0	32.6	10.2	-0.8	8.9	6.7	9.1
Equity in assets <sup>1</sup>	522.5	583.5	720.8	807.2	588.5	505.9	441.1
% return to equity	2.3	5.6	1.5	-0.1	1.5	1.3	2.1
Total farm assets <sup>1</sup>	637.6	705.8	867.6	994.1	766.4	673.7	597.9
% return to assets	3.1	5.9	2.7	2.0	3.3	3.0	3.7

<sup>1/</sup> December 31 of previous year.



## Farm Sector Balance Sheet, Excluding Dwellings

	1985	1986 <sup>F</sup>	Percent change	1987 <sup>F</sup>	Percent change
<b><u>Assets</u></b>					
Real estate	559.6	509	-9	474	-7
Total	771.4	707	-8	669	-6
<b><u>Liabilities</u></b>					
Real estate	97.3	92	-5	89	-3
CCC	16.9	22	30	17	-23
Total	192.1	186	-3	174	-6
Equity	579.3	520	-10	494	-5
D/A ratio	24.9	26.4		26.1	

## Farms and Farm Operator Debt

<u>Cashflow status</u>	<u>No debt</u>	<u>Low debt</u>	<u>High debt</u>	<u>Total</u>
<b>Positive household earnings</b>				
Percent of all farms	22	23	10	55
Percent of debt	0	21	29	59
Percent of production	15	33	19	67
<b>Negative household earnings</b>				
Percent of all farms	18	16	11	45
Percent of debt	0	13	37	50
Percent of production	5	12	16	33
<b>All farms</b>				
Percent of all farms	40	39	21	100
Percent of debt	0	34	66	100
Percent of production	20	45	35	100

As of January 1, 1986.

## Flow of Funds to Farm Sector

	Average for period				1985	1986 <sup>F</sup>	1987 <sup>F</sup>
	1970-71	1972-74	1975-79	1980-84 \$ billion			
Gross cash income	55.7	83.2	107.9	149.0	156.2	150.3	150.4
Less: Expenses (no interest)	32.5	43.9	64.8	88.0	87.4	86.7	85.2
Equals: Cash flow	23.2	39.3	43.1	61.0	68.8	63.6	65.2
Less: Interest paid	3.3	4.5	8.7	19.3	17.9	15.3	15.0
Equals: Net cash flow	19.9	34.8	34.4	41.7	50.9	48.3	50.2
Plus: Net borrowing	3.4	7.5	14.9	8.0	-14.9	-11.1	-6.2
Equals: Funds available	23.3	42.3	49.3	49.7	36.0	37.2	44.0

## Flow of Funds to Farm Sector

	Average for period				1985	1986 <sup>F</sup>	1987 <sup>F</sup>
	1970-71	1972-74	1975-79	1980-84 Billion 1982 dollars			
Gross cash income	128.9	165.7	157.8	152.2	139.8	131.3	127.2
Less: Expenses (no interest)	75.1	87.4	94.5	90.1	78.2	75.7	72.1
Equals: Cash flow	53.8	78.3	63.3	62.2	61.6	55.6	55.2
Less: Interest paid	7.6	8.9	12.8	19.6	16.0	13.4	12.7
Equals: Net cash flow	46.1	69.3	50.7	42.4	45.6	42.2	42.5
Plus: Net borrowing	7.8	14.9	21.4	8.7	-13.3	-9.7	-5.2
Equals: Funds available	53.9	84.3	72.1	51.2	32.2	32.5	37.2

**Cost Reducing Technology - Early Adoption**

	<u>Old</u>	<u>New</u>
Corn Yield (bu)	140	130
Corn Return (@ \$2.00/bu)	\$280	\$260
Production Costs	\$250	\$220
Net Returns	\$ 30	\$ 40

**Cost Reducing Technology -  
Widespread Adoption**

	<u>Old</u>	<u>New</u>
Corn Yield (bu)	140	130
Corn Return (@ \$2.00 old and \$1.80 new)	\$280	\$234
Production Costs	\$250	\$220
Net Returns	\$ 30	\$ 14

## Input Indices

	<u>Total Inputs</u>	<u>Farm Labor</u>	<u>Farm Real Estate</u>	<u>Mechanical Power</u>	<u>Agricultural Chemicals</u>	<u>Cropland Harvested (Million acres)</u>
	1977 = 100					
1940	97	416	107	36	9	341
1950	101	309	109	72	19	345
1960	98	206	103	83	32	324
1970	97	126	105	85	75	293
1980	103	92	103	101	123	352
1985	100	79	98	86	120	347

## Output Increasing Technology - Early Adoption

	<u>Old</u>	<u>New</u>
Corn Yield (bu)	140	160
Corn Return (@ \$2.00/bu)	\$280	\$320
Production Costs	\$250	\$280
Net Returns	\$ 30	\$ 40

## Output Increasing Technology - Widespread Adoption

	<u>Old</u>	<u>New</u>
Corn Yield (bu)	140	160
Corn Return (@ \$2.00 old and \$1.80 new)	\$280	\$288
Production Costs	\$250	\$280
Net Returns	\$ 30	\$ 8

## Productivity Indices

	Output per Unit Total Input	Crop Production per Acre	Output per Hour
	1977 = 100		
1940	52	53	12
1950	61	59	19
1960	77	77	37
1970	87	88	66
1980	101	100	112
1985	117	118	139







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